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Y4.Ed 8/1:99-49

REAUTHORIZATION OF THE HIGHER EDUCATION ACT

Title V (Teacher Training) and Title I (Continuing Education)

Volume 7

HEARINGS

BEFORE THE

SUBCOMMITTEE ON
POSTSECONDARY EDUCATION

OF THE

COMMITTEE ON EDUCATION AND LABOR
HOUSE OF REPRESENTATIVES

NINETY-NINTH CONGRESS

FIRST SESSION

HEARINGS HELD IN WASHINGTON, DC, JULY 31
AND SEPTEMBER 5, 1985

Serial No. 99-49

Printed for the use of the Committee on Education and Labor

ORIGINAL

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U.S. GOVERNMENT PRINTING OFFICE
58-933 O WASHINGTON : 1986

For sale by the Superintendent of Documents, Congressional Sales Office
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REAUTHORIZATION OF THE HIGHER EDUCATION ACT

Title V (Teacher Training) and Title I (Continuing Education)

Volume 7

WEDNESDAY, JULY 31, 1985

House of Representatives,
Subcommittee on Postsecondary Education,
Committee on Education and Labor,
Washington, DC.

The subcommittee met, pursuant to call, at 10 a.m., in room 2175, Rayburn House Office Building, Hon. William D. Ford (chairman of the subcommittee) presiding.

Members present: Representatives Ford, Dymally, McKernan, Goodling, and Petri.

Staff present: Birdie Kyle, legislative associate, Kristin Gilbert, clerk, Thomas Wolanin, staff director, Richard DiEugenio, senior minority legislative associate.

Mr. Ford. I am pleased to call to order this hearing of the Subcommittee on Postsecondary Education. We are continuing our hearings on the reauthorization of the programs contained in the Higher Education Act.

This is our 15th hearing held in Washington on specific facets of the act. Thus far we have also held 10 field hearings, and have now accumulated more than 80 hours of testimony on the record. We have eight more Washington hearings, and one more field hearing scheduled at this time.

Today's hearing will focus on the programs that provide training and professional development opportunities for our Nation's teaching force under title V of the Higher Education Act.

Beginning in 1965 the Federal Government supported three major teacher training programs. They were National Teacher Corps, Education Professions Development, and the National Teacher Centers. By 1981, all three programs had been repealed by Gramm-Latta.

These programs were enacted from the mid-1960's to the mid-1970's during a massive teacher shortage nationwide. We have come full circle. Another massive teacher shortage is being projected. Unless we act to head it off, it will reach its peak by 1992.

We begin today's hearing with the thought that we need to increase the quantity of our teacher force, as well as to upgrade the quality of our teachers, present and future, keeping in mind that many of the initiatives needed to achieve our goals cannot be provided by the Federal Government, but must be provided through State and local initiatives. Many State and local governments have already responded in a variety of ways to address these issues. The subcommittee now is looking for appropriate and timely ways in which to complement and build upon those efforts.

Our witnesses today will describe the many problems now confronting the teaching profession—from kindergarten through post-secondary schools—and will offer remedies that we can adopt as part of our renewed Federal response to these critical needs.

Once again I want to announce that if there is anyone here who is interested and we have not been able to accommodate as a member of the panel, you may submit any testimony you would like for the record, and it will be included contemporaneous with today's hearing. And if, indeed, you—whether on a panel or not—are provoked by anything that you hear from people on the panel, we would be most pleased to have your reactions to that in the record. We don't want to overlook one single idea that might be out there to help us do this complex job.

[The prepared statement of Hon. Joseph M. Gaydos follows:]

PREPARED STATEMENT OF HON. JOSEPH M. GAYDOS, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF PENNSYLVANIA

In our hearings on the reauthorization of the Higher Education Act, it has not been surprising that an overwhelming amount of time has been focused on student aid programs, primarily because of the impact of those programs on so many.

But, today's hearing, which focuses on teacher training programs, is no less important, especially if we believe that the education of our children is the key to the future growth of this country.

And, in that regard, there is nearly universal agreement that the single most important element in determining a quality education is the teacher. Yes, it is true that some students will learn regardless of the teacher just as it is also true that some students will not learn. But there is little doubt that for the great majority of our young people in both public and private elementary and secondary schools, the teachers will make a big difference.

For as long as I can remember, the debate has raged over what makes a good—or great—teacher. And, today, we appear to be no closer to the answer than when the debate first started.

More than 20 years ago, after a two-year study of teacher training programs and teacher certification policies and practices, Dr. James Bryant Conant published "The Education of the American Teacher" in which he made a series of recommendations concerning teacher training that are still being studied.

More recently, the American Association of Colleges of Teacher Education, the National Council for Accreditation of Teacher Education, the National Commission on Excellence in Teacher Education, and many other private organizations and individuals have made similar and different suggestions and proposals.

Several States have reviewed certification procedures to determine if changes are necessary. A number of teacher training institutions are prepared to offer warranties to guarantee the quality of their graduates. And, as we all well know, more and more States are requiring prospective—and, in some cases, already certified—teachers to pass competency exams.

Certainly, we are interested in all of these developments. Still, in terms of the Higher Education Act, our role is more to assist those teacher training institutions so that they will be better able to produce teaching candidates whose personal qualities and training will show them to be leaders and guides for our youth.

I hope our witnesses today will be offering us concrete suggestions on how we can help teacher training institutions achieve that most important goal.

Mr. FORD. The first panel will be Dr. Katherine Merseth, director of mid-career math/science project, Graduate School of Education at Harvard University, and Dr. James Smith, deputy superintendent of public instruction, State of California.

Rod, I understand you have an introduction to make.

STATEMENT OF HON. ROD CHANDLER, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF WASHINGTON

Mr. **Chandler**. Mr. Chairman, thank you very much for this opportunity to introduce one of the panelists this morning.

I am Congressman Rod Chandler from the Eighth District of the State of Washington. My thanks, once again, to you for bringing the committee to our State for one of the field hearings.

I think you have stated the problem well. The shortage of teachers in the math/science field is one that has reached critical proportions, in my view. Compounding that is the fact that in future years, demographically, we are going to simply have fewer young people graduating from colleges and universities to staff all of the needs in America, including teaching.

As I look at the situation, it seems reasonable that we would look at a nontraditional source of personnel for our classrooms. This has brought about the bill, H.R. 2805, to set up a pilot project of at least one institution of higher education in each of the 10 Federal regions.

I would like to introduce Dr. Katherine Merseth, who is the director of a program at Harvard University upon which this legislation is based. I had read about the program last year and then became acquainted with Dr. Merseth and began the process of drafting the legislation. I have visited Harvard and her program and talked with both students and graduates of her program. I am enormously impressed. I know you are going to take field hearings to that area, and I hope that you will have the opportunity to visit with some of these people. I know that you will be impressed with them as well.

I will submit my prepared testimony for the record. I want you to hear Dr. Merseth and her thoughts about her program and how it has worked thus far.

[The prepared statement of Hon. Rod Chandler and the text of H.R. 2805 follow:]

PREPARED STATEMENT OF HON. ROD CHANDLER, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF WASHINGTON

Mr. Chairman, thank you for the opportunity to appear today. My interest in the field of education has been a long and continuing one. Our youth are the future and their education is of the utmost importance. Therefore, teaching is perhaps the most important profession. Yet, we hear almost daily of poorly qualified teachers and teachers assigned to classes outside of their field.

We are facing a severe shortage of math and science teachers. And its only going to get worse. Officials predict that there will be a 25% drop over the next dozen years in the number of 18-25 years olds. At a time when the world is becoming more and more driven by new technology, I believe we must make every effort to provide this much needed resource. The Department of Education has estimated that we will need one million teachers by the year 1990. Many of these will be in the technological fields, simply because of the direction in which our world is moving.

In recently introduced legislation designed to provide mid- and late-career professionals who already possess backgrounds in math and science with the training to become classroom teachers. In times like these, we should look to nontraditional sources for some of our teachers.

The Mid-Career Math and Science Teacher Training Program would provide teacher training to individuals with an educational background and experience in math and science. H.R. 2805 would create a two-year pilot project geared to finding teachers from nontraditional sources. At least one institution would be chosen from each of the ten Federal regions based upon competitive application.

Participants would need a degree and job experience in mathematics or science or both. The institution would be directed to design a program which includes a screening mechanism to choose individuals who would be likely to succeed as classroom teachers. The active participation of qualified classroom teachers would be required as well as follow-up assistance. Upon completion of the intensive study, individuals would be certified as teachers.

Many individuals ask why an engineer or research biologist would want to leave a lucrative job to become a teacher. The Harvard Graduate School of Education, which developed this innovative approach on which my bill is based, was astounded at the number of applicants. Many potential participants are eligible for early retirement or voluntary severance plans. Depending on the industry and the employee's status, good pension plans often are available. For many individuals in the mid- to late-career category, the two most significant financial expenses of their careers—mortgage payments and college tuitions—are well behind them. With changing financial requirements, a new career in teaching may not be as economically constraining for a mid-career professional as it would be for a young college graduate. Teaching also enables many of these professionals an opportunity to serve—a way to fulfill a dream.

While it may be true that these individuals could enter existing teacher preparation programs, many will not because the programs may not take their experience and previous education into account. I also believe that these individuals have unique needs which can best be met through a special program. We are dealing with mature individuals who learn differently and already have expertise in the subject matter.

The proposal includes a screening process at the suggestion of many in the teaching profession. The process is general, and allows the institution a great deal of latitude; but I believe that institutions must screen applicants. We are looking for individuals who desire to teach, not those who are looking for a way out of a dead-end job.

The cost of the program is minimal in comparison with the long-term benefits to be achieved. Institutions would receive an initial planning grant not to exceed $100,000 for two years with a renewal grant not to exceed $50,000 for two years. These funds are for planning purposes. Institutions will not receive funds beyond the planning process.

H.R. 2805 has been endorsed by the National Education Association, the Continuing Mathematical Education Committee of Teachers (a committee of the Mathematical Association of America), and the Washington Council of Deans and Directors of Education. Many within the teaching profession were solicited for their comments and the reaction has been positive. We have a vast untouched resource here. We should take advantage of it.

As I indicated, this legislation is based on the program developed at the Harvard Graduate School of Education. They are about to begin their third year, under the direction of Dr. Katherine Merseth. I was fortunate enough to visit with her at Harvard and meet with many of the students and become more familiar with the program. Dr. Merseth received her doctorate from Harvard in 1982. She had received a Masters in teaching from that institution and has a Masters of Mathematics. She has taught in several schools in the United States as well as in other countries. She has worked extensively in the teaching profession, and I am pleased that she is here to tell you about the Mid-Career Math and Science Program and its success. It is my hope that we can spread the success that Harvard has seen across the country with H.R. 2805. Thank you, again, Mr. Chairman, for the opportunity to be here today.

99TH CONGRESS
1ST SESSION

H. R. 2805

To amend the Higher Education Act of 1965 to create a program supporting midcareer teacher training programs for individuals with expertise in mathematics and science, and for other purposes.

IN THE HOUSE OF REPRESENTATIVES

JUNE 19, 1985

Mr. CHANDLER (for himself, Mr. GOODLING, Mr. HENRY, Mr. JEFFORDS, and Mr. TAUKE) introduced the following bill; which was referred to the Committee on Education and Labor

---

A BILL

To amend the Higher Education Act of 1965 to create a program supporting midcareer teacher training programs for individuals with expertise in mathematics and science, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

This Act may be cited as the "Mid-Career Math and Science Teacher Training Act".

SEC. 2. AMENDMENT.

Title V of the Higher Education Act of 1965 is amended by adding at the end thereof the following new part:

“PART G—MIDCAREER TEACHER TRAINING

“PURPOSE

“SEC. 581. It is the purpose of this part to encourage institutions of higher education with schools or departments of education to establish and maintain programs that will provide teacher training to individuals who are moving to a career in education from another occupation in which they developed expertise in mathematics or science, or both.

“COMPETITIVE APPLICATION FOR GRANTS

“SEC. 582. (a) From the funds available for this part, the Secretary shall make grants to institutions of higher education on the basis of the competitive selection among qualifying applications. Institutions selected as recipients shall be awarded (1) an initial planning grant for use during the first two fiscal years after selection, and (2) for those institutions demonstrating successful performance with the planning grant, a renewal grant for use during not more than two additional years.

“(b) Applications for grants under this part shall demonstrate that—

“(1) the applicant will establish and maintain a program of midcareer teacher retraining designed to prepare individuals for teacher certification requirements who already have a baccalaureate or advanced degree and job experience in mathematics or science (or both);

"(2) the applicant has designed a program which includes at least the following elements:

"(A) a screening mechanism to assure that individuals who are admitted to the program possess the current subject matter knowledge needed and the characteristics that would make them likely to succeed as classroom teachers;

"(B) a clear set of program goals and expectations which are communicated to participants; and

"(C) a curriculum that, when successfully completed, will provide participants with the skills and credentials needed to teach in specific subject areas as well as a realistic perspective on the educational process;

"(3) the program has been developed with the cooperation and assistance of the local business community;

"(4) the program will be operated under a cooperative agreement between the institution and one or more State or local educational agencies; and

"(5) the program will be designed and operated with the active participation of qualified classroom teachers and will include an in-service training component and follow-up assistance.

"(c) Applications for grants under this part shall be reviewed by a panel of experts in teacher training designated by the Secretary. The Secretary shall, to the extent of available funds, select at least one applicant from each of the ten regions served by the Department of Education.

"AMOUNT OF GRANTS

"SEC. 583. The initial planning grant to an institution of higher education shall not exceed $100,000 for the two years for which it is available. The renewal grant to an institution shall not exceed $50,000 for each of the two years for which it is available.

"REPORTS AND INFORMATION

"SEC. 584. Each institution of higher education that receives a grant under this part shall submit to the Secretary such reports and other information on the program it conducts under this part as the Secretary deems necessary. The Secretary shall disseminate such information to other institutions of higher education for the purpose of promoting greater use of midcareer teacher training programs without direct Federal financial assistance.

"AUTHORIZATION OF APPROPRIATIONS

"SEC. 585. There are authorized to be appropriated to carry out this part $4,000,000 for fiscal year 1987 and $5,000,000 for each of the three succeeding fiscal years."

○

Mr. **Ford**. Thank you very much, Rod. Thank you for making it possible for us to hold what was a very successful field hearing in Washington with the very fine panels of witnesses representing the views of the people way out there on the edge of the world on the far west coast. We will be on the other edge of the world, in Maine, next month with our colleague from that State. It is interesting to get out to these extremes. I am a very moderate, middle-of-the-country midwesterner, and it is always a great adventure for me to get to the far frontiers and see that my people are really just like people out there.

We will now hear our first witness, Ms. Merseth.

Without objection, your prepared statement will be inserted in the record in full. You may proceed to supplement it, add to it, comment on it, or summarize as you wish. Go ahead.

STATEMENT OF KATHERINE K. MERSETH, PH.D., DIRECTOR, MID-CAREER MATH/SCIENCE PROJECT, GRADUATE SCHOOL OF EDUCATION, HARVARD UNIVERSITY

Ms. **Merseth**. Good morning, Mr. Chairman. I would like to thank you very much for inviting me and Mr. Chandler to discuss the Mid-Career Math/Science Program with you this morning.

As you have already noted, this country faces a very serious shortage of teachers in the next decade. Shortages of predicted levels of 1 million new teachers will be needed by 1990. To put that in perspective, 1990 is only 5 years away and, in fact, the predicted shortage represents a 40-percent replacement rate of our 2.5 million teachers.

If we look specifically in the math/science area, some researchers are predicting that we will need 300,000 new math and science teachers by the year 1995. That, Mr. Chairman, is more than the total number of math teachers and science teachers that we have teaching today in our country.

At the Harvard Graduate School of Education we noticed these predictions and we set out 3 years ago to find an alternative source of high-quality teachers. But first, one must understand the problem. The shortage of math and science teachers in particular and teachers in general can be explained by two factors: a trickle of new, young individuals entering the teaching profession and a flood of experienced professionals going to other better paying jobs and to retirement.

The trickle of new individuals coming into the profession is marked by statistics such as from 1971 to 1980 the teacher training institutions in this country produced 80 percent fewer math teachers. In New Hampshire, for example, they graduated one individual trained to teach mathematics in 1983. In my State of Massachusetts, we graduated two individuals trained to teach physics in 1983. Young people are not going into the teaching profession.

The flood of experienced individuals from the profession is also dramatic. Six out of ten math teachers in the suburbs of Boston plan to leave teaching completely within the next 2 years. Also, we have an aging, graying teacher force. The average age for math and science teachers nationally is 43. These individuals will probably complete their teaching careers during this decade.

The flood is such that now for every new math and science teacher that our colleges of education are graduating, 10 teachers are leaving the profession, according to a Rand Corp. study. The causes for the shortage are well-known. In particular, they are economic, the mean starting salary for teachers in this country is $15,500. The average for all teachers after years and years of experience working with children in our country is $22,000. A second cause is teaching is no longer a valued profession. Would you advise your son or daughter to enter the teaching profession today? Finally, a third reason that we see this trickle of individuals coming into the teaching profession is demographic, and it is one that is often overlooked. The number of 19- to 24-year-olds in this country is declining. It will decline at a rate of 25 percent for the next dozen years. Thus, our traditional pool of new teachers, individuals in this age range who often go to teacher training colleges or universities, is simply not there.

We feel that the response of higher education institutions should not be to lower entrance standards simply to find more warm bodies to be with our children. The academic levels of education majors already are abysmally low. Nor do we feel that it is appropriate to waive all entrance criteria or certification standards and place individuals with little knowledge of children in our classrooms. We all know that a nuclear scientist may be wonderful at his profession, but if he or she has not received training, this individual may not be the least bit effective teaching high school mathematics. Rather, institutions of higher education, professional organizations and State and local government must look to alternative sources for high-quality teachers. We must explore a variety of resources. We must truly rethink teacher education to find good teachers, and good teachers in math and science in particular.

The Mid-Career Math/Science Program is now in its third year at the Harvard Graduate School of Education and represents an alternative source of high-quality teachers. It is designed for mid- to late-career professionals who have strong quantitative backgrounds who have an interest in working with high school children. This program and others like it, for example, the Washington University program in St. Louis with Monsanto Chemical and the University of Vermont with General Electric, turn these social, economic, and demographic constraints on their head. For example, midcareer individuals often carry with them pension plans or retirement bonuses, and therefore the economic constraints that we see facing a young person going into teaching are much less constraining for these mid- to late-career professionals.

Socially, these are individuals who have already made it; they have been successful, they are not losers in their fields and therefore the negative social connotations that very unfortunately we have in this country today about teaching are not as constraining for mid- or late-career professionals.

And finally, the demographics. The age group of 49- to 55-year-olds is precisely the group in this country that is increasing in size, and therefore represents a very strong, very nontraditional labor pool for new classroom teachers.

Also, it is very important, my colleagues and I feel at the graduate school of education, that we place individuals in our classrooms that have some knowledge about how math and science is actually used: What good is it for? And these are individuals who have worked in their careers sometimes 20, 25, 30 years using mathematics and science and therefore can answer the question that kids often ask: What good is this for?

Who comes to the program? In our 3 years, we have had over 600 inquiries each year for the 20 places that we have in the program. To give you some sense of the careers of the individuals, we have a meteorologist, a Navy retired rear admiral, an Army colonel, a missile systems designer, engineers, ecologists, a demographer, public health specialists, a Ph.D. chemical engineer, a public defender with a mathematics undergraduate degree, geologists, microbiologists, biochemists, statisticians, computer systems engineers, and civil, electrical, and other types of engineers. Just yesterday, I had a call from a physician who was very interested in coming into the high school classroom to teach biology.

How good are they? Academically, these candidates are extraordinary. On the graduate record examination, which is an examination given to measure academic ability, they rank in the 95th percentile of individuals going into the teaching profession. They hold Phi Beta Kappa honors frequently, and nearly all of them have either master's or doctorate degrees in the fields that they will teach.

But I must stress that we screen them with extraordinary care. Not everyone that knows math and science makes a good math and science teacher, and therefore we interview them; we ask them to come and talk with us in particular about their views of children and classrooms, we look at their current knowledge of mathematics and science, and we look for personal references as well.

Why do the people do it? The most common question I get about the program is, Why would anyone want to leave a position like that and go into high school classroom? Basically, the aplicants give three reasons. The first is a sense of service. These are individuals who want to pass along something to the next generation. The second reason is that they are interested in a change in the quality of their lives. Probably like you, they are sick and tired of getting on and off airplanes, working in a very fast-paced world, and they would like to be in one place in one position working with children. Finally, most of them in one way or another say that they would like to do something worthwhile with their lives and that they feel that our educational system has given them a great deal. They would like to repay the debt that they have incurred.

What do we do with them? Our program is very heavily based in the field. We have a strong belief that it is important to work closely with current high school and junior high school classroom teachers and local education agencies. Our candidates spend a great deal of time out in the field working with classroom teachers because the best way to learn about teaching is not by reading about it in a library; it is by doing it, and doing it under close supervision and under coaching. And therefore, we do quite a bit of this and have close working relationships with area schools.

The impact of the program? Well, you may say we only have 20 to 25 people graduating each year but, in fact, when you calculate the effect that each one of our graduates will likely teach 100 students each year, after 5 years, graduates of our program will affect directly the lives and the math and science learning of nearly 18,000 students.

The goal of the Harvard program is to see this success copied. Some institutions have done so already; nearly 35 have contacted us for information. We need alternative sources developed for high-quality individuals to enter the teaching profession.

The bill that Representative Chandler has introduced, H.R. 2805, represents an effective means to promote such dissemination. I urge you to support it. Our Nation's children need and deserve high quality teachers.

Thank you.

Mr. **Ford**. Thank you very much.

[The prepared statement of Dr. Katherine K. Merseth follows:]

PREPARED STATEMENT OF DR. KATHERINE K. MERSETH, HARVARD GRADUATE SCHOOL OF EDUCATION, CAMBRIDGE, MA

The condition of American mathematics and science education at the secondary level has deteriorated significantly over the past twenty years. Both the numbers of students studying math and science and the achievement levels of all but the very gifted as measured by SAT's and the National Assessment of Educational Progress have declined steadily since the early sixties.[1] This disturbing situation occurs at a time when industry's need for qualified workers with math and science backgrounds—from Ph.D.-level senior scientists to high school educated technicians—is on the rise. Moreover even those students who go on to non-technical careers often lack a minimum level of math and science competency required for non-quantitative jobs and daily living.

Federal commissions, state legislative task forces, private foundations and individual scholars investigating these downward trends all stress the critical importance of the classroom teacher in the delivery of a quality education. Findings generated by such studies indicate that the current math/science education crisis is due, in significant part, to:

(1) A critical shortage of entry-level teachers certified in physics, math and chemistry; and

(2) Significant attrition among experienced math and science teachers who are leaving education for higher paying jobs or for retirement.

The trickle of qualified secondary school math and science teachers entering and the flood of those leaving the profession have resulted in a frightening shortfall. In 1980, America's institutions of higher education produced 78% fewer math teachers and 64% fewer science teachers than they had in 1971.[2] In 1982, 42 states (out of 45 responding) reported either a "critical shortage" or a "shortage" of mathematics and physics teachers.[3]

Since 1982, this shortage has worsened. For example, the 49 teacher training institutions in Massachusetts produced 2 teachers certified to teach physics in 1983, while New Hampshire graduated one individual trained to teach mathematics. The popular press continues to draw attention to the shortfall: In 1984, the New York City schools were "short several thousand teachers as schools were about to open" and Georgia recruited West German teachers of math and science to fill vacant positions.[4]

ECONOMIC, SOCIAL AND DEMOGRAPHIC FACTORS

The decline in the number of entry-level mathematics and science teachers is the result of economic, social and demographic forces. Young, capable college graduates with scientific ability find that their aptitudes and training are far better compensated in industry than in education. Starting salaries in the computer or banking industries for technically trained individuals often rank between twenty-five and thirty thousand dollars, while in 1984, the mean starting salary for new teachers with a Master's degree in Massachusetts was $15,409. Not only are starting salaries much lower, but opportunities to reach a high salary level after long service are non-existent in education. For example, the average salary of public school teachers with 6 years experience and a Masters degree in Massachusetts in 1984 was $16,589.[5]

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[1] National Science Board, Educating Americans for the Twenty-First Century, 1983 Department of Education, A Nation at Risk, 1983.

[2] Howe and Gerlovich, "National Study of the Estimated Supply and Demand for Science and Mathematics Teachers," 1981.

[3] General Accounting Office, New Directions for Federal Programs to Aid Mathematics and Science Teaching, 1984.

[4] Education Week, August, 1984; USA Today, February, 1983; Christian Science Monitor, July 1982.

Negative economic and social conditions are exacerbated by demographic changes that will heavily influence the future production of math and science teachers; over the next dozen years there will be more than a 25% drop in the number of 18–25 year olds.[6] Neither the pay differentials suggested by some to bridge the economic gap, nor the laws enacted by many state legislatures to forgive undergraduate student loans for the study of scientific education address the fact that the traditional labor pool for new teachers—those in their early twenties—will decrease significantly over the next decade.

Additionally, the increased career opportunities now available to women have had an adverse impact on the supply of new teachers. Prior to 1970, women served as a "hidden subsidy" because teaching was one of the few professions accepting women. Since 1970, however, the percentage of women earning Bachelor degrees in education has dropped dramatically from 38% in 1970 to 17% in 1981.[7]

The flood of experienced teachers to non-education fields is also economically and socially based. In 1980, almost five times more science and mathematics teachers left their school systems to take non-teaching jobs than left due to retirement.[8] And this trend will continue: a survey of mathematics and physics teachers in the Boston area indicated that within the next two years, six out of ten math teachers plan to leave teaching, while 13 out of 19 physics teachers hope to find other non-teaching positions.[9] In addition to the obvious economic advantages of such a career change, these professionals are leaving teaching because they believe that society does not value their contributions. In a recent 1984 Gallup Poll, teachers felt that the most crucial problem facing local public schools was the lack of parental support. Their beliefs are reinforced by low salaries and the general societal attitude that teachers are involved in little more than sophisticated childcare.

In addition to those leaving the profession to achieve social and economic enhancement in other fields, the supply of teachers will be decimated by retirements. The typical teacher in the nation's public schools today has gray hair. Demographic data on the current teaching force suggest that over 25% of those who were teaching in 1980 will retire before 1990.[10] Taken together, retirements and job changes cause labor economists to predict the need for 300,000 to one million new teachers by 1990.[11]

In addition to a serious shortage of teachers, very few current or aspiring classroom teachers from traditional programs have experience in the applications of mathematics and science. These individuals must rely on teacher's manuals and other commercial materials to convey the usefulness of the subjects. While many teacher in-service training opportunities were available for math and science teachers in the 1960's to update and develop subject matter knowledge and skills, fewer opportunities have been available recently to teachers. As a result more than half of the current science teaching force has not attended an in-service workshop or professional meeting in the last 10 years.[12] In classrooms this weak link to realistic applications leaves most students with little sense of the relevance of the materials or the excitement of the scientific method.

The response of higher education institutions to these problems of diminished supply of new teachers and a large exodus of veteran teachers should not be to lower standards to attract more prospective teachers; the academic achievement levels of entering teachers are already among the lowest of the college graduates. Nor will it be prudent to attract individuals to the profession with subject matter expertise but little knowledge or training in the teaching of that subject. Knowing the subject matter does not a successful teacher make. Rather, institutions across the country must recognize and utilize a new source of highly qualified teachers who possess extensive subject matter knowledge and understanding as well as ample and directed training in techniques to transmit this knowledge to students.

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[5] Massachusetts Department of Education, 1985.

[6] Bureau of Census, U.S. Department of Commerce, Projections of the Population of the United States: 1982 to 2050, 1982.

[7] Darling-Hammond, Beyond the Commission Reports, 1984.

[8] Levin, American School Board Journal, September, 1982.

[9] Useem, "Education in a High Technology World: the Case of Route 128," 1982.

[10] Levine, American Enterprise Institute paper, 1984.

[11] Time Magazine, July, 1985, Chicago Tribune, July 21, 1985.

[12] Shymansky and Aldridge, National Science Teachers Association, 1982.

AN INNOVATIVE SOLUTION: THE MIDCAREER MATH AND SCIENCE PROGRAM

To address the increasingly critical shortage of high quality math and science teachers, the Harvard Graduate School of Education (HGSE) crafted an unusual response. The MidCareer Math and Science Program is designed to provide mid to late-career professionals who already possess quantitative backgrounds in high technology, scientific research and financial services with the training they need to become secondary math and science classroom teachers.

Early experience with the MidCareer Math and Science Program at the Harvard Graduate School of Education suggests that individuals possessing these important skills and the willingness to enter the teaching profession do exist. Now in its third year of operation, the MidCareer Math and Science Program demonstrates that this new source of quantitatively trained individuals represents an alternative supply of classroom teachers. The Program, which awards either a Master's degree or a Certificate of Advanced Study, is conducted during the academic year with optional summer study workshops. Some individuals choose to pursue the Program half-time while changing from their former careers. All participants intend to undertake full-time classroom teaching assignments upon completion of the program.

Most importantly, the program is accredited by the Massachusetts Department of Education. Graduates receive teaching credentials for middle or high school teaching positions of mathematics, physics, chemistry biology or general science. This certificate is transferable to over 25 other states through reciprocity agreements.

The MCMS Program has four objectives:

To improve the condition of math and science education for children at the precollegiate level by crafting an innovative response to the shortage of qualified teachers;

To demonstrate that a previously under-utilized and large labor pool for education—mid/late career professionals—can and will make a significant contribution to the education of our nation's youth;

To infuse school settings and curricula with knowledge conveyed by mid/late-career professionals of realistic applications of math and science; and

To offer an innovative model for other educational institutions across the country to address the condition of secondary mathematics and science education at the local level.

PARTICIPANTS

The quality and the number of individuals the MCMS Program attracts is impressive and surprising to some. The men and women participating in the Program's first three years have had diverse backgrounds and careers, including a retired rear admiral and army colonel, electrical, civil, chemical and mechanical engineers, biochemistry and microbiology specialists, physicists, photographic scientists, higher education professors of chemistry and physics, a public defender with an undergraduate degree in mathematics, a missile system designer, a chief meteorologist from the U.S. Weather Service, statisticians, geologists and a veterinary technician. All of these participants and the vast majority of the over 625 individuals who have, since June 1984, expressed an interest in attending the program for the 1985-86 year have Master's or Doctoral degrees in the fields they intend to teach.

Midcareer professionals are a particularly appropriate source of new teachers because many of the economic, social and demographic factors mentioned previously are not as constraining for this group. Many potential participants in the fifty to sixty year old age bracket are eligible for early retirement or voluntary severance plans. Depending on the industry and the employee's status, good pension plans are also available to them, frequently guaranteeing up to 50% of previous income levels.

The social argument that teaching is not a status-conferring career also bears less influence on midcareer professionals because many professionals have already established their reputations in another field. Recent research on career development indicates that many individuals in this age bracket have economically—and psychologically—"plateaued" in the corporate world and would welcome an opportunity for new challenges.[13] Teaching as a second or third career offers a change of pace and a new employment environment.

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[13] Bardwick, "Plateauing and Productivity," 1983.

The demographic factors that will contribute to the trickle of young people entering teaching are also more favorable for the midcareer professionals. The age group of 49-54 year olds will increase significantly in the next decade.[14] This factor, coupled with the increasing interest and legality of professionals to work beyond the age of 62 or 65, combined with increased early retirements make the potential contribution of this age group extremely large.

ACADEMIC QUALITY AND MOTIVATIONS

Concern about the academic quality of teachers has at its roots the fact that the vast majority of new U.S. teachers in any field stood in the bottom third of their class on measures of academic ability.[15] Equally disturbing is the finding that the least academically able are likely to stay in the profession while those with more academic ability leave after a short period of service. While there has been some debate as to the relationship between teacher academic ability and student achievement, recent research now shows a modest relationship between the verbal ability of teachers and students' learning.[16] These findings give a foundation to the clarion calls for higher entrance standards for the profession.

Through an examination of student applications to the Midcareer Math and Science Program from 1983 to 1985, it is clear that the MCMS program attracts teacher trainees who do not reflect the academic profile of others intending to teach. Indeed, these candidates present extraordinarily strong academic credentials. On the Graduate Record Examination, applicants from 1983 to 1985 for the MidCareer Math and Science Program had a mean verbal score of 618 and a mean quantitative score of 634. Based on data provided by the Graduate Record Examination Board about test takers intending to enroll in education (including teacher training) programs, these results respectively fall in the 95th and 91st percentiles nationally. With respect to academic talent, teacher candidates in the MidCareer Math and Science Program represent individuals who, unlike their counterparts in other "traditional" programs, are academically outstanding. Their academic excellence may in part be explained by an observation of sociologist Dan Lortie: "Teaching is somewhat special in that those who enter it as a second choice possess above-average educational qualifications. In that sense, teaching has an enviable competitive position; its accessibility fosters the entrance of people who might never have gone to college to become teachers."[17]

The reasons these participants have given for wanting to become classroom teachers at mid-career are varied, but two common themes emerge: the desire to change the quality of their own lives and the wish to contribute to the education of young people. Take, for instance, a Ph.D. chemical engineer who was among the Program's first graduates. This individual stated,

> I've acquired all this knowledge [while obtaining a Ph.D.] and I'm looking for an opportunity to pass it along. It's not that I don't feel good about engineering! But I think I'd feel better if I had a chance to influence some students. I want to do something more meaningful with my life.

Professionals also express a desire to empower younger individuals. References to the "next generation" are frequent. Another candidate, presenting his motives for a shift to teaching, wrote,

> I do this because in the last analysis, I have learned something about myself: that the pursuit of money and power has never been my goal; and that self-respect and the certain knowledge that I can contribute something worthwhile to society during my short stay here on earth are my primary concerns.

Other candidates express a concern about "quality of life" factors. Some note that business travel, competition and the nature of the work with computers or other inanimate objects is no longer fulfilling. Although frequently expressed in interviews, one candidate wrote, "The involvement with people is an important factor to me because a good proportion of my time in the past few years has been occupied in dealing with objects: engineering drawings and specifications, investigations and reports." No candidates suggest that teaching is an easy job; their respect for the profession is immense. But they do perceive that the quality of life and opportunities for personal satisfaction will be much greater in teaching than in their previous careers.

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[14] Bureau of Census, 1982.

[15] Weaver, "Solving the Problems of Teacher Quality, Part I," 1984.

[16] Schlecthy and Vance, "The Distribution of Academic Ability in the Teaching Force," 1982.

[17] Lortie, School Teacher, 1975, p. 49.

THE PROGRAM OF STUDY

The nine months of study provided by the MCMS program include a total of eight courses divided among educational theory, methods of teaching math and science, classroom practice and electives. Building on the in-depth subject matter expertise and familiarity with real-world applications that participants already possess, the MCMS program provides the skills and credentials these individuals need to teach as well as a more realistic perspective on the educational process. More specifically, the academic program includes: the study of teaching and learning from a developmental and cognitive psychology perspective; the study of schools as organizations; and the study of the practice of teaching in specific subject areas.

The program's participants also take a number of elective courses at the Graduate School of Education and other schools of Harvard University. These courses range from Adolescent Psychology to the Philosophy of Science. In addition, nearly all of the program's students participate in an examination of the psychological, pedagogical and social impact of interactive technologies and computers on thinking and learning in the classroom.

Beyond their work at Harvard, participants work directly with practicing classroom teachers in a variety of school settings. The program strongly emphasizes this field-based component and encourages the active participation of classroom teachers in the training of these new teachers. The ratio of HGSE personnel who supervise the practice teaching component of the program to students is high and mentor teachers within participating school districts receive special training to enhance their contact with program participants.

Although the annual enrollment of twenty students is a small number in the face of the critical shortages described above, the impact of programs such as the MCMS program should not be underestimated. Conservatively calculated, the forty-five individuals graduating in the MCMS program's first three years each will teach 100 students per year, and thus, after five years, these individuals will have directly affected the education of 16,000 secondary school students who might otherwise have been taught with less commitment, less enthusiasm, and less awareness of how math and science directly impact the quality of life.

Moreover, one of the primary goals of the Harvard program is to disseminate strategies for bringing mid-career professionals into the teaching profession. To this end, the legislation, H.R. 2758, introduced by Representative Chandler has tremendous potential to influence mathematics and science education in the United States. The legislation, by supporting the dissemination of this concept, offers many advantages to several constituencies:

For the nation's children, the legislation will support programs to produce well-trained professionals to deliver math and science instruction. Such instruction, enthusiastically and knowledgeably delivered, will enable students to function better as individuals and contributing members of our society.

For the nation's schools, the legislation recognizes an important shortage and supports a system to utilize a new labor pool never seriously considered before. This legislation represents a powerful plan to address concerns of teacher quality and preparation in secondary education.

For business and industry, the legislation helps to produce better trained young people to enter the workforce. In addition, it offers the the potential of greater flexibility and increased productivity within the corporation as a result of viable career alternatives for current employees.

For other graduate schools of education, this legislation stands as a resource to take positive action to address the status of pre-collegiate math and science education.

Mr. Ford. Mr. Chandler has talked to us before, since he introduced the bill, about this program, and it has caught our interest. But I just don't think it goes far enough. I happen to be rebelling against the idea that the only thing we need in schools out there are more math and science teachers. I don't find very many of my constituents who can name three countries in Central America, who know that Nicaragua is not the same size by population as the United States and that it isn't on our border and, indeed, they could not march across to Houston, TX, any morning they felt the inclination to do so with an army of 5 million people. It might as well be on the other side of the Moon.

It amazes me that at a time when people are turning on the television and hearing about places that I am asked about this funny country in South America called Chad, and get a very blank look when I say, "Well, Chad is in the middle of Africa." "That a funny place for it; it sounds like a Central American country to me."

I think there are a lot of people who might help a little bit. I have a feeling that the people who are teaching the social studies and geography at the high school level are the people who can't teach anything else. And I have also had the experience within the last year of running into a social studies teacher at the high school level, who was a member of a teachers' organization, who was endorsing the same candidate I was for President. She indicated that it was a matter of no consequence to her because she didn't bother to register or vote anyhow; she thought it was a waste of time. I didn't know then that she was a social studies teacher. I had a kind of a hunch occur when she went out of her way to tell me that. I said, "Pardon me. What is it that you teach the children in high school?" "Social studies." Great person to be in that classroom. She doesn't think that registering or voting is at all important.

That leads me to my question. If we were to expand Mr. Chandler's bill to other disciplines, do you think you would get a similar interest? You indicate that 600 people inquire for 20 positions in math and science. If we were to go into other disciplines, do you think that we would get a similar result?

Ms. **MERSETH**. Yes; I think you would attract the same interest. I can only tell you from my experience of the individuals who call me, who are disappointed to hear that we only do math and science. These are individuals from all walks of life. I think it would be much more difficult to target where to look for these individuals and how to make knowledge of these programs available.

I think the time has come to look for alternative sources of teachers; and midcareer individuals are a fabulous resource for all areas, not just math and science.

Mr. **FORD**. In my State it is not uncommon to see people come from public life, from business, from professional backgrounds and start lecturing on a fairly regular basis—not full time—at one of our colleges and universities. It never happens in high school. There isn't a way to get them in.

Ms. **MERSETH**. That is right. Frequently one of the impediments is that we have very complicated certification requirements in our States that often restrict and keep, I think, some of the best individuals out.

Mr. **FORD**. Well, that has been a real sticking point in the past, but as I understand your program, you make it possible for people to meet the minimum education requirements for certification.

Ms. **MERSETH**. That is correct. We have worked very closely with the State Department of Education in Massachusetts and our individuals are certified. And because the States frequently have reciprocity agreements. They can immediately teach in 25 other States, one of which is your State. And we are finding that they can transfer those credits also to other States. So we have surpassed the certification problems that some people face.

Mr. **FORD**. Thank you.

Mr. Goodling.

Mr. GOODLING. Thank you, Mr. Chairman. I suppose first of all I should say that with an airbase and Soviet Mig's they don't really have to march from Nicaragua or Chad, or any other place.

The program you are speaking of, of course, is one of those programs that I was trying to include in the math/science bill that passed on the House side. It wasn't quite as specific after the Senate was finished with it. But the hope was that we could take these people who, first of all, may not need that $60,000 salary at this particular time of their life and get them into an area where there appears to be a critical shortage of talented teachers and give them enough so that they could obtain certification.

I always used to tell Chairman Perkins that in NDEA it was great for industry because we just gave the teachers enough so that we could prepare them in math and science to the point where industry wanted them, and then we lost them from the education profession. Before we gave them that opportunity industry didn't want them because they weren't quite ready. Now, perhaps, we can bring them back; after all, we educated them in the first place in some instances with Federal dollars. So I can understand the effort.

I think what we have to do is look at how many programs we have going now, find the extent of duplication and perhaps refine the bill based on what we discover. In Mr. Chandler's bill, for instance, timing would be ideal because I believe it would begin when the math and science bill is supposed to expire, and that will be a good time to look to see what we have accomplished.

I think that probably the good math and science students are also quite knowledgeable about geography and history. The difficult thing is to make the average person get enthused, and we need to do a lot with teachers. I can remember supervising student teachers in the Pittsburgh area. That day in October of 1962 the headlines in Pittsburgh papers reported the missile crisis in Cuba, and pointed out that the missiles could hit Pittsburgh. I couldn't wait to get there to see what my student teachers were doing with that news. Not one student teacher mentioned it the entire day, and when I had a session after classes and really lit into them, they said they were told by the supervising teacher that, "We have a schedule to keep and we can't get off that schedule." For the first time those youngsters who were about as much interested in sitting through those social studies classes as—I don't know what analogy to use—but at any rate, they had an opportunity to turn them on and the cooperating teachers didn't allow them to alter from the program. They had the syllabus and they had to follow it.

So I think if we can get to the point where we have those kind of funds to make creative social studies teachers—make social studies teachers into creative social studies teachers we can do a lot to help.

I don't have any questions to ask other than to say I support what it is Mr. Chandler is aiming at. That we do have, not what I would call a baby boom, but we have more people at the child bearing age—what is called, I believe, the echo effect from the baby boom. And therefore, we are going to need additional talented teachers.

So I compliment my colleague. I am a cosponsor of his bill, and I think, as I said, his begins when math and science legislation is up for reauthorization, and at that point we can see how we can combine all these efforts. Maybe at that time, if we can get, as I refer with the press, the three bullheads—the House, the Senate, and the administration—together on some budget program, we might even be in a better position to handle these programs in the near future. But at the present time each is acting like stubborn Pennsylvania Dutchmen, and I know what they are like.

Thank you, Mr. Chairman.

Mr. CHANDLER. Mr. Chairman, could I make just a brief comment?

I would like to endorse the comments that you made about this being a limited piece of legislation, and obviously it was designed that way with two concepts in mind. One was to address the most critical shortage in teacher education, not ignoring the fact that there is a shortage in all disciplines. The second is that this doesn't pretend to be a piece of legislation which would solve the problem, but simply create a pilot for those States and those regions to emulate so that they could solve the problem.

If I had my way, I would put one of these institutions, and completely fund it with Federal dollars, in every single State. But I think, at least in my view, the reality is that we won't be able to do that, and so that is why I have created it in this limited scope. And I would really appreciate the opportunity to work with you and, if you choose to expand this, and perhaps even expand funding if we can find the source for it. I know that we would have ample assistance from the department of education at Harvard University. I spoke with the dean there when I visited, and they have a lot of information to share, as do other institutions. But if we could proceed in that order, I think we will accomplish a great deal.

I have to think that if Bill Goodling and Bill Ford were in their twilight years to go back into the classroom, you damn right they would turn on those kids there. They might get off the syllabus and tell some war stories, but they would probably have some interested students, too. And that would be true of somebody who has been president of a company or whatever else. The nontraditional source of teachers could very well provide us with something more than just a good quality teacher, but somebody who is going to capture the interest of those kids.

Mr. FORD. Rod, I think that you can do an awful lot with ideas of this kind without an awful lot of money. Not a lot of money in terms that we talk about money here. Because when you put the measure of credibility behind it of adopting a national policy as a part of an education program, there are people like our witness on college campuses all over the country who are waiting for somebody to listen to them.

Mr. CHANDLER. Right.

Mr. FORD. And if they can walk in and say, "You know there is a Federal program that says they will give us a little seed money to get this started," they can break through the crust that surrounds the education establishment in every institution.

I happen to sit on a board called the Commission To Study the Future of Education at Harvard. It doesn't meet. Maybe they stopped meeting after my first meeting there because I was kind of an anachronism in that group with some of the ideas I expressed.

But I would like to ask you, Ms. Merseth, have you seen the Carnegie study on women's careers? It started out as a study to see how effective title IX had been in changing the education of women. And one of the things that has stuck with me ever since Ernie Boyer sent that down to us is a graph that shows the major professions and the percentage of professional degrees taken by women and men. You find in law, medicine, architecture, engineering, dentistry, and business, starting in the mid-1970's, a very sharp increase in the percentage of degrees that were going to women. By 1980, it was really going up at a rapid rate. The next profession that is on the graph is education, and the graph is exactly the opposite of all the other graphs. The percentage of women getting graduate degrees in education has dropped precipitously, almost at the same rate that it has increased in the other professions. It doesn't take an awful lot of imagination to figure out what is happening.

The dean of the school of education at Southwest Texas is writing a book on his 30-some years of experience as a dean of education. A very interesting fellow, who would generally be regarded as a consevative, who starts off with the statement that for almost 200 years this country managed to operate a reasonably good public school system because it had an inexhaustible supply of cheap labor in the form of women for teachers. In my own generation, young women knew if you were a nice white middle-class girl and you said you were going off to college to become a nurse or a teacher, that was respected in the community. If you said you were going off to become a mathematician, a doctor, a lawyer, or a dentist, they thought probably you needed some kind of a mental examination. And indeed, in my generation very few women could succeed in those other professions. Society wasn't ready for it yet.

Now society has changed very dramatically in the last 20 years. For the good I believe. But the opportunities for women have changed and it is now clear to me that a little bit more than one-half of the population is now making career decisions for the same kinds of reasons the other half made them all along.

You mentioned the salaries. One of the things that doesn't get discussed in the "Nation at Risk" report is the emphasis they put on the fact that the teacher profession is suffering from the fact that it is the lowest paid college-trained profession extant. People who want to use that report, pick out the critical parts of it, tend not to notice that criticism. And if you have now liberated that slave population that we had before, how are you going to replace it?

Now some States have done some interesting things in very dramatically trying to upgrade their teachers' pay. I happen to come from a State that has the highest average teacher pay of any State outside of Alaska, where everything runs off the chart. But even there and even with the fact that we have reduced the number of teachers in classrooms in that State because of population shifts by about 11,000 in just 6 years, most of my high schools do not have competent people with math and science substance teaching math and science. Frequently you find a teacher who has been teaching

English for 20 years, but she has the seniority to stay behind; when they start reducing the teacher force, they shift her from teaching English to now teaching math, and she is a little bit puzzled by a classroom of kids who come through modern math techniques that weren't in the classrom when she was learning her math. That is not unusual. That unfortunately is very often the case.

There is at the moment it seems to me a growing awareness. I have talked with the presidents of both of the big teacher organizations about this. Al Shanker has been dropping in to see me and talking about his concern about the quality of teachers in the classroom for 5 or 6 years, long before "A Nation at Risk" came out. "What kind of strategy, Bill, can we put together to try to recruit and retain the kind of people that we need for our classrooms in this country?" And of course, both he and Mary Futrell are very, very professional people who obviously are not going to go out and make speeches about the inadequacies of teachers but continue to demonstrate to us a very strong concern about what is happening to the profession.

In 1958, when Sputnik stirred the American people, this committee passed the National Defense Education Act. The emphasis then was math and science because it was easy to translate to the American public the idea that if those dumb Russians could put something in orbit they must have a lot of people who knew math and science, maybe we had better catch up. It worked. Nobody who has looked at the history, and that indeed was the bill that paved the way for the Higher Education Act of 1965, the act that we are now talking about reauthorizing. But indeed, we produced a lot more than math and science people. We produced a tremendous supply of school teachers at a time when the country had the baby boom coming through the school system. Perhaps the biggest single professional attainment that you could identify coming out of that legislation was the creation of teachers. They are not teaching anymore. They are now in Silicon Valley working for four times as much money designing computer chips.

We are trying to find some sort of an approach that we could use through the schools. It was said, when I first came on the committee 21 years ago, by people coming from schools of education that it took about 25 years for a good teaching technique or a new idea that someone discovered in the classroom to reach the teachers colleges. There was so much inertia in the system and so much reluctance to break away from traditions that that was the case. They now tell me that is no longer true. That indeed the teachers colleges—we still refer to them that way in Michigan—are very much in touch with what is really going on in the real world of teaching.

It seems to me that if we were to do something with initiatives such as the one you have suggested this morning, we might encourage an alternative that a lot of people would like to have and nobody wants to advocate. This business of the teacher certification is very important, but it is extremely sensitive now. In Mr. Goodling's State of Pennsylvania, the State was sued by a religious group that said we are more interested in the religion of our teachers than whether or not they can do math or anything else, and fortunately or unfortunately, depending on your point, they prevailed as I understand it and they were able to break through the requirement that you have some basic qualifications for teaching. That hasn't started a flood but it has put everybody on guard.

Your approach has a great deal of appeal to me because what it literally says is that you will prepare somebody to meet those barriers and you will not be tearing down the sacred barriers that are supposed to separate qualified persons in teaching. I am very enthusiastic about the idea. I hope we can work something out and use this act as a vehicle to get your idea moving.

You have already, obviously, infected Rod Chandler very effectively. He has been aggressively pursuing the objectives of this bill ever since he came on the committee at the beginning of this year, and I want to work with him. And we appreciate very much what you have done with him and for this committee.

Mr. Dymally?

Mr. **Dymally**. Mr. Chairman, just a brief comment. While I am aware and appreciate the work of the graduate schools in education, I am concerned about the State college, State teacher training program, which has not received research funds. I would want to be assured in this legislation that Slippery Rock gets some money. I know that would make Mr. Goodling very happy. And I want to be sure that Stanislaus State in my State gets some money.

In the past, these funds go to graduate schools which indulge in more research than teacher training. My own State system, the University of California, is not as concerned about teacher training as the State college and university system. They are more concerned about research. And I would like to see in this bill adoption of some language, as recommended by Mr. Pierce of the Council of Chief State School Officers, that the money go to the States and they distribute the money on the basis of teacher training performance rather than research.

That would be my reservation about this. These top 10 Ivy League schools are very good about writing proposals while the State colleges have to depend on the legislature. They don't get any research money and yet they do all the teacher training. That assurance ought to be written in the bill.

I commend Mr. Chandler for the introduction of that piece of legislation because I think there is a crisis in America today in math and science teacher training and we need a piece of legislation like this. The amount he puts in is very modest. I suspect that is in keeping with the budgetary restraints. But we should adopt this piece of legislation, but at the same time be giving some assurance that the State colleges will benefit from it.

Mr. **Ford**. Thank you. I would respond to the gentleman by pointing out that Mr. Chandler's bill doesn't have it in but it wouldn't do damage to it if you said that it could only go to an institution that has a teachers college, as we call it, as a part of the institution.

Mr. **Dymally**. Not "only," but I want to be assured that they get some.

Mr. **Ford**. Well, there is a requirement, for example, that the program will be operated under a cooperative agreement between the institution, which is the applicant, and one or more State or local educational agencies. Off the top of my head I would guess that that means only the teachers colleges in Michigan because they are the only ones who have ongoing relationships with local school districts and intermediate districts, and they would probably take to it very naturally. They are going to be teaching, not the subject matter that this person would be teaching, but the methodology that they would employ, the professional courses, if you will, that teachers are required to take: elementary roll taking, elementary grade giving, and things of that kind.

Mr. GOODLING. Would the gentleman yield?

Mr. FORD. I have an idea that if we had that kind of concern in some of the States that we probably could change Mr. Chandler's bill and give preference to institutions that have established, ongoing education programs already rather than let somebody play around with it in their engineering school, for example.

Mr. GOODLING. I was going to make the point that we are talking about 10 pilot projects in this bill, in 10 different regions, and then from that point on I would think that we would want to make very, very sure that if those models prove worthwhile that others then would have an opportunity, assuming we had the money, and that would be a cross-section. But you are correct in that most of them would be those, and we would want them to be, who are currently involved in education programs, not somebody dreaming something up that may not reach reality, or be in tune with reality.

Mr. FORD. Thank you

Mr. Dymally, you want to introduce the other witness?

Mr. DYMALLY. Yes. Thank you very much, Mr. Chairman.

Thanks to you we were able to invite the superintendent of public instruction in California to testify on this very important subject. Because of a previous commitment he was unable to come, but he has sent his deputy, and I am very pleased that Dr. James Smith is with us today to discuss this very vital subject of teacher education.

I am pleased to welcome one of my constituents, Dr. Smith.

STATEMENT OF JAMES R. SMITH, PH.D., DEPUTY SUPERINTENDENT OF PUBLIC INSTRUCTION, STATE OF CALIFORNIA

Mr. SMITH. Thank you, Mr. Dymally, Mr. Chairman, members of the subcommittee. Bill Honig, superintendent of public instruction, sends his regrets for not being here today.

I am representing the California State Department of Education; the agency along with 1,000 local education agencies is responsible for educating 4.5 million elementary and secondary students. I want to thank you for this opportunity to suggest some direction on teacher training as the subcommittee addresses reauthorization of the Higher Education Act.

I am particularly pleased to be here representing a State education agency. There seems to be a common misperception about the role of State education agencies in the area of teacher training. I would like to just briefly correct that misperception. In California, the State education agency and the local education agencies conduct virtually all of the inservice training of teachers. I will also later on point out that higher education, conducting preservice training in isolation from the State education agencies have not always been responsive to the K–12 system.

States have accepted the challenge to reform education. In my written testimony I have outlined a number of reforms that we have implemented in California, and I think you will find similar experiences in other States. But these reforms are not enough. Teacher quality is the key to improving education. I want to tell you today about three impediments to significantly improving teacher quality in California. First, we face a serious shortage of qualified teachers. Second, there is a need to retrain a significant portion of the existing teaching force. And third, we desperately need to attract more minorities to the teaching profession.

Let me talk first about the teacher shortage. The overriding need is to attract and retain top-quality teacher candidates, and I want to emphasize quality. Currently we have approximately 180,000 classroom teachers in California. Over the next 5 years we need to hire another 100,000 new teachers; 15,000 to 20,000 of these new teaching positions come from growing enrollments, 75,000 to 80,000 come from retirements or for teachers leaving the profession for other reasons. I want to make it clear that we will hire 100,000 men and women. The important question is what will be the quality of those persons hired? Will we attract the brightest and best qualified college graduates? If not, the reform effort will fail. Once again public expectation for improvement of education will be raised and we will fail, and once again the public will become disillusioned with the public schools and probably further disillusioned with government generally. If we fail to attract the brighest and best educated, a whole generation of students will suffer.

Turn now to the issue of retraining teachers. If we are to adequately prepare existing teachers to teach the more rigorous academic curriculum we are demanding, most of them must be retrained. In California, we estimate the need to retrain as many as 120,000 existing teachers. The reform effort is having an effect in California. We are seeing a major shift toward more academic curriculum in both elementary and secondary schools. Students are taking more mathematics, more science, more history, more literature and fine arts. Most of the current teaching force is unprepared to meet this challenge.

The third problem is that of providing for successful participation of minorities in schools and colleges. By the turn of the century, whites will be the minority in California. Already 47 percent of our elementary and secondary students are minorities. Elementary school populations in the urban cities in California already are predominantly minority. The importance of successful role models for young children is well documented; yet, less than 20 percent of our teachers in California are minorities. This tends to reflect the general underrepresentation of minorities in all professions. Our ability to attract minorities to the teaching profession is limited because we must compete for the tragically small number of minority college graduates. We must compete with engineering, law, medicine, and other more prestigious, higher paying professions. Our only hope is to increase the pool of minority college graduates.

So much needs to be done. Less than 4 percent of the black and less than 5 percent of the Hispanic high school graduates in California qualify for admission to the University of California. The data on those who enroll and actually graduate are even more discouraging.

These three crises are real and immediate, but I am optimistic that there are some practical steps that you can take that will provide the States with the necessary incentives and assistance to address these problems. I will make recommendations for you to consider in each of the three areas I have mentioned; that is, recruiting and preparing new teachers, retraining existing teachers, and attracting minorities to the teaching profession. I will also comment on the role of the State education agencies in teacher training.

First, recruiting and preparing new teachers. The rigorous elementary school curriculum we are demanding of local education agencies requires teachers with well-rounded liberal arts educations. These are teachers who understand, enjoy and can teach mathematics, science, literature, history, art, and physical education. Most teachers have graduated and have been credentialed without completing a single college-level course in one or several of these subjects. Indeed, the need for better trained teachers is probably most critical at the elementary grades. Of course secondary teachers must be well steeped and prepared in their subject areas. This all implies a much larger role in teacher training for academic faculties of colleges and universities.

In the past, schools of education have tended to operate in isolation. They have not been accountable to their academic colleagues for how well teachers are trained in content and not accountable to the K-12 schools who employ their graduates. We recommend that the subcommittee consider fiscal incentives to encourage closer collaboration between schools of education and academic departments. As I will argue later, State education agencies should also be a member of such a partnership.

I would also like to comment briefly on the topic of accountability. There is growing interest in testing of beginning teachers. Assessment is critical for teachers, teacher candidates and teacher training programs. However, a national teaching test may be an attractive quick fix that may cause as many problems as it solves. We would recommend that the committee consider providing incentives to States to develop their own criteria for testing teachers. Such criteria must be broad enough to measure teachers' knowledge of the subject to be taught, pedagogy and performance in an actual teaching setting for a reasonable period of time, at least 1 full school year. I believe such a proposal would have broad appeal and support from the various segments of the education establishment.

To continue with the problem of recruiting top quality teachers, we need to make young people aware that teaching jobs are available and that teaching is a noble profession. We find in California visiting campuses that a lot of the college students are not aware that they can actually get a job teaching. They are not aware of the teacher shortage. To that end, we recommend a national advertising campaign aimed at boosting the prestige of teachers and of the teaching profession. We recommend reviving the Teacher Corps. Bill Honig, my current boss, was first introduced to education as a Teacher Corps volunteer in the Hunter's Point area in San Francisco. We further recommend expansion of scholarships and loan credits for teachers.

The second area in which I would like to make recommendations is that of retraining existing teachers. This problem is at least as large as that of recruiting and the preservice training of new teachers. I would like to make three points about inservice training.

First, it must be subject matter based. That is, specific training in ways to teach math, history, literature, or physical education. Much needs to be done to develop specific content-based teaching strategies aimed at meeting the needs of a diverse student population. Every child has a right to an academically right education. We have an obligation to develop teaching methodology that is effective with each and every child.

Second point, training should be of sufficient scope and duration to make a difference in a teacher's skills. This would include, at a minimum, several weeks in the summer with followup support throughout the school year. One-shot workshops do not work and are a poor investment.

My third point is that we should recognize the magnitude of the problem and provide sufficient resources to address it. Parenthetically, I do not want to imply that this is solely or even primarily a Federal responsibility. But any Federal initiative should, however, be cognizant of various State efforts and supplement, rather than duplicate, them. This does imply that Federal programs would be sufficiently flexible to allow for differing State efforts.

This summer, the California State Department of Education funded an institute for English teachers on the UCLA campus; 100 teachers will spend 6 weeks working with authors, scholars, and colleagues. They will then receive followup support throughout the next school year. This is a model of the type of training necessary to actually bring about improvement in teaching skills. It is also an example of a successful partnership between a State education agency and the academic faculty of colleges and universities. I will supplement my written testimony later with some further examples for the committee to consider.

Finally, I think you may also be interested in knowing that the funds for this institute came from the State purposes portion of ESEA, chapter 2. I do want to point out, however, that only 100 teachers will be trained. In California, we have 10,000 English teachers, 8,300 history teachers, 5,500 science teachers, and over 100,000 elementary teachers. Such programs are, obviously, quite costly. Our experience has shown that they cost around $3,000 per trained teacher. I would argue, however, to do less would probably be a waste of time and money.

The third area in which I want to make recommendations is that of attracting more minorities to the teaching profession. The shortage of minority teachers is symptomatic of the failure of the elementary and secondary and postsecondary schools in this country to adequately address the needs of minority students. Existing programs in elementary and secondary schools focus on disadvantaged students who are achieving below grade level. These are necessary and helpful programs.

But what about the economically disadvantaged child who is fortunate enough to be reading at grade level. For him or her there are no extra services. Even though experience has shown that such students are at risk of dropping out before receiving a diploma or all to frequently are drifting through a nonacademic course of study aimed nowhere in particular. A little support, a little guidance and a lot of encouragement will salvage this terrible waste of talent. I recommend the committee consider offering fiscal incentives for institutions of higher education to work with the K-12 schools to provide support to such students beginning as early as grade 4. High school is frequently too late. Mr. Dymally's H.R. 2557 is an example of the type of program that I have in mind.

Finally, I want to address the role of the State education agency in teacher training. You have received written testimony on this subject from Ted Sanders, superintendent from Illinois, and from the Council of Chief State School Officers, all of which we support. State education agencies are the spokespersons for the K-12 schools. They influence what will be taught through their curriculum guides, frameworks, achievement tests, and so forth. It seems obvious that they should also have a voice in what teachers are prepared to teach. In California, the State education agency along with the local education agencies provide nearly all of the inservice of existing teachers, much of which is necessitated by inadequate preservice training.

I have mentioned earlier the problems of schools of education preparing teachers without accountability to their consumers, nor to their academic colleagues. Therefore, I recommend the subcommittee consider requiring all Federal funding for preservice and inservice training of teachers passed through the State education agency with a requirement that they collaborate with schools of education and academic faculties of colleges and universities.

Thank you for your attention. I will be glad to answer any questions.

[The prepared statement of James R. Smith follows:]

PREPARED STATEMENT OF JAMES R. SMITH, DEPUTY SUPERINTENDENT, CALIFORNIA STATE DEPARTMENT OF EDUCATION

I am representing Bill Honig, Superintendent of Public Instruction of California. He sends his regrets for not being able to be here today.

I am James R. Smith, Deputy Superintendent, for Curriculum and Instruction Leadership, from the California State Department of Education. Our Department, along with over 1,000 school districts, is responsible for educating four and one-half million students in kindergarten through 12th grade. I want to thank the Subcommittee on Postsecondary Education for providing us the opportunity today to suggest some direction on teacher training as you work on the reauthorization of the Higher Education Act.

I am particularly pleased to be here as a representative of a state education agency to talk about teacher training. There is a common misperception that state agencies are not involved in and have no role in teacher training. I would like to correct that misperception. In California local K-12 educational agencies and the State agency account for nearly all inservice training. Furthermore, higher education, in operating preservice programs in isolation from state agencies who represent the K-12 system has not been responsive to those who hire their graduates.

We have reached a critical point in recent efforts to improve our schools. In California we have made substantial gains. We have increased requirements for graduation, strengthened curriculum and expanded the time students attend school. We have provided incentives to districts to raise beginning teachers' salaries 54% over three years. We have implemented a mentor teacher program, an administrator training program, teacher loan assumption programs and regional teacher training centers. We have reformed laws regarding teacher discipline and dismissal, teacher evaluation, and student discipline. Funding for California schools has been increased by three and one-half billion dollars over the past three years. Even so, we are still spending $132 per pupil less than the national average.

These and other reforms are necessary but not sufficient in and of themselves to stem the tide of mediocrity and improve student achievement. If we are to meet the economic and social challenges of the 21st Century, we must improve the quality of teacher preparation. Your work on the teacher training provisions of the Higher Education Act offers an important opportunity to address this critical issue.

I want to call your attention to three crises facing us in California: first, the imminent teacher shortage; second, the need to retrain a substantial proportion of the existing teaching force; and third, the need to attract more minorities to the teaching profession. Allow me to comment on the scope and importance of each of these issues.

TEACHER SHORTAGE

It is absolutely essential that we attract top quality candidates into teaching and that we keep our best teachers in the profession. I have some statistics to share with you. The sheer magnitude of the task is staggering.

We currently employ more than 180,000 classroom teachers in California. More than 70% of these are teaching at the elementary and intermediate levels. In the next five years, we will hire 100,000 new teachers. Increases in the number of students will account for 15,000 to 20,000 additional teachers. An additional 75,000 teachers will be needed to replace retiring teachers and those who leave the profession. The vast majority of these will be hired at the elementary level.

These numbers represent only a small part of the crisis. We will hire 100,000 men and women. But will they be teachers who are well trained in pedagogy and who are themselves well educated? Unless there is a massive national effort to recruit and retain the very best of our college and university graduates they probably will not. We stand to see a whole generation of elementary and secondary school children suffer. A whole generation will not be adequately prepared as citizens, employees and educated persons.

RETRAINING

We are also faced with an equally huge task of retraining the existing teaching force. The retraining problem is compounded by the success of our own school improvement efforts. We are experiencing a substantial shift in the curriculum demanded by students and their parents. A recent Stanford University study found that since the 1982-83 school year California high schools have increased their offerings of advanced placement courses by 34%. The researchers found a 22% increase in the number of sections offered in science and a 19% increase for mathematics. Substantial increases in advanced English courses, and American and British literature have also been reported. Elementary schools are shifting to a more rigorous curriculum emphasizing more problem solving in mathematics, more science, more history and literature based reading.

For the most part, the existing teaching force is not prepared to assume these new responsibilities. This fact highlights the need for extensive inservice training of existing teachers. As many as 120,000 of our teachers in California will need retraining to keep them up-to-date with new curriculum demands, new technology and new instructional methods. These teachers are a key resource and must be adequately supported with retraining and inservice opportunities. Weekend and after school workshops will be inadequate to make a difference in the skills of these teachers. Much of what passes for staff development today is superficial and a poor investment of time and money.

MINORITY TEACHERS

In addition to our need for 100,000 new teachers and the demands for academic rigor, I want to emphasize a third problem of crisis proportions. This is the issue of providing for successful minority participation in our schools and colleges and ultimately our society. By the turn of the century, Whites will be the minority in California. Already, 47% of our elementary and secondary students are minorities. The importance of role models for young children is well documented. However, less than 20% of our teachers are minorities.

Out of every 100 high school graduates, fewer than four Blacks, and five Hispanics are eligible for admission to the University of California. One-third of White high school graduates are eligible for admission to the state college system, compared to only 15% of the Blacks and 10% of the Hispanics. The teaching profession must compete with other more highly paid and prestigious professions for this pool of college students. It is absolutely imperative that we increase the pool of minorities who graduate from high school eligible to enter college.

In California and other states the crisis is real and immediate. I am here to urge you to act now to help states and schools address these issues. The consequences of an inadequate public education system have been clearly stated by the National Commission on Excellence in Education in A Nation at Risk. The states have accepted the challenge, but reforms and determination alone will fail without a high quality teaching force. We need your help to ensure its creation and maintenance.

As disturbing as this situation is, we face it with optimism justified by the swell of public resolve to revitalize our schools and by our sense that there are practical steps we can take to solve the problems. A federal role is critical. I will recommend steps you can take in each area I have commented on: recruiting and preparing new teachers, retraining existing teachers and attracting minorities to the profession. I will also comment on the role of the state agency responsible for K-12 education.

We must recruit new teachers who are academically well prepared. The rigorous elementary school curriculum we are demanding requires teachers with a well rounded liberal arts education—teachers who understand, enjoy and can teach mathematics, science, literature, history and the visual and performing arts. Secondary school teachers must be well steeped in their subject area. The kind of preparation implied here will require a much larger role for the academic faculties of our institutions of higher education. Our current teacher training programs are not set up to do this. Schools of Education operate in relative isolation from the academic departments. We need to change this so that the history professor and the education professor work together preparing new history teachers and new elementary school teachers. We recommend that the Subcommittee consider fiscal incentives to encourage this collaboration. New teachers prepared through such efforts are much more likely to have the knowledge of an enthusiasm for their subject needed to make it come alive for students.

There is growing interest in substantially improving the accountability for teacher quality. Assessment is a critical issue for evaluating teachers, teacher candidates and teacher training programs. While a single national test for teachers has appeal as a quick fix, it may cause more problems than it will solve. It would, however, be a great contribution to provide federal incentives for states to develop teacher evaluation criteria. Such criteria must include knowledge of the subject to be taught, pedagogy, and evaluation of performance in actual teaching settings. This would enjoy broad support from higher education, K-12 educators and the public who are demanding accountability.

But before we can prepare and evaluate them, we must attract quality college graduates into teaching. A national advertising and media campaign which boosts the prestige of the profession and highlights its benefits can go a long way toward renewing its appeal. If this campaign is going to succeed in improving the public's perception of teaching careers, it must be nationwide. At the same time, organizational efforts must be initiated or broadened. The teacher corps program should be revived, teacher scholarships and loan credits need to be expanded. Future teacher clubs analogous to Future Farmers of America can be established with a minimal investment.

Such efforts to recruit and prepare new teachers must be matched by programs to retrain existing teachers. This retraining, at elementary and secondary levels, must be subject matter based. Generic teacher training currently available has proven inadequate and, in some cases, injurious to the rigor and richness of the curriculum. This implies the need for closer involvement of the higher education academic faculty with K-12 teachers.

Research and experience have demonstrated that for training to effect changes in classroom practice, it must include ongoing support, coaching and feedback extending over at least one school year. One shot workshops and conferences without this kind of follow-up are not good investments. An example of a well designed training is the Literature Institute our state agency funded. It was kicked off by a four-day workshop on the UCLA campus that brought together classroom teachers and academic faculty, authors and other scholars. The workshop was followed by a six week summer institute for one hundred selected teachers who will eventually train and coach their colleagues. The follow-up continues throughout the school year to provide support for teachers as they implement what they learned at the Institute. This not only exemplifies the type of training needed to improve classroom instruction, but also collaboration between the state agency responsible for K-12 education and an institution of higher education.

The Literature Project is the right approach, but only one hundred teachers will be trained. We have 10,000 English teachers in California. Retraining programs must be of sufficient size to train enough teachers to make a difference. In California we have 8,300 history teachers, 5, 500 science teachers, and 8,300 mathematics teachers and over 100,000 K-8 school teachers. Our experience is that this kind of training costs about three thousand dollars per teacher trained. Even this amount assumes a substantial contribution of resources by school districts and institutions of higher education.

Meeting our increasing need for minority teachers will require much more than a media campaign or general improvements in the status of the teaching profession. Most existing state and federal programs are intended to provide remedial assistance to those students whose performance places them in the lowest quartile. These lower level skill development programs are important. However, we do not have programs which encourage the entire spectrum of minority candidates to excel academically and to seriously consider entering the teaching profession. We need to assist and influence those economically disadvantaged students who are already performing at grade level to excel academically so they may become part of the pool of minority college graduates from which teachers may be recruited. I am talking about programs which at the high school level, would provide academic counseling and assistance coupled to internships and summer jobs in the teaching profession. But intervention in high school is often too late for many talented minority students. We should consider programs which begin assistance as early as the fourth grade and provide support throughout the students academic career. Peer counseling, peer tutoring, parent training, future teacher clubs are all strategies that have been successful and could be used as part of such programs. We should encourage creative solutions to this problem as the importance of attracting more top quality minority teachers cannot be overemphasized.

Collaboration between groups that train and hire teachers must be promoted. State education agencies (SEAs) are in a unique position to foster such joint efforts. They are in a position to represent the interests of the many school districts (over 1,000 in California) who are the consumers of the teachers "produced" by the postsecondary education institutions. SEAs are also pivotal in the development and dissemination of curriculum guidelines, and course content which should be the foundation of teacher training programs. SEAs also develop and administer tests by which student achievement is assessed.

State and local K-12 agencies provide almost all of the existing inservice training. We need greater cooperation between these agencies and institutions of higher education, particularly the academic faculties. Therefore SEAs must play a major role in determining the content and quality of preservice and inservice teacher training programs.

Congress is to be complimented on its work on PL 98-377 which provides support for strengthening the teaching of mathematics and science. In California our state agency worked out a partnership with the California Postsecondary Education Commission to jointly manage our grant. By pooling our funds, we will be able to fund training programs of sufficient scope to incorporate summer training, follow-up support, coaching, and feedback throughout the school year for a significant number of teachers. In addition, this partnership ensures that higher education and K-12 are addressing the same priorities, and that the program is managed in a consistent and coordinated manner. We recommend that partnerships of this type be formalized in Title V. Requiring that funds pass through state education agencies is the best way to accomplish this. This recommendation is consistent with that made by the Council of Chief State School Officers which we heartily endorse.

The states have taken major steps to implement reforms in the K-12 system, but these efforts are threatened by the three problems we have been discussing. The numbers I have cited are real and compelling. The consequences for our nation's future are profound. Yet, we can succeed by taking practical steps at the local, state and federal levels. Such steps must include collaboration among the academic faculties of higher education, the schools of education, the state educational agencies responsible for K-12, the local education agencies and the federal government. I hope my recommendations prove useful to you in your work reauthorizing the Higher Education Act.

Thank you for affording me this opportunity to testify.

Mr. **Ford**. Thank you. Your former Governor got national attention when he announced that California was woefully short of qualified match and science teachers a few years ago, long before "A Nation at Risk" and the new-found anxiety that has grown up since that report was published.

What initiatives have you taken at the State level with your own resources to do something about that?

Mr. **Smith**. There are a number of programs in California aimed at in-service training. There is only one currently that is aimed specifically at training mathematics teachers, and that is called the California Math Project, which operates through the University of California. Essentially it works this way: It is a summer institute. I think there are about six or eight of these around where university faculty and secondary faculty, primarily, come together and work on improving of the mathematics skills of teachers. That program trains somewhere in the neighborhood of 300 teachers a year. Not enough to keep up with the number of math and science teachers that we are losing.

California has funded a large number of what I describe as a generic staff development programs, both regional training centers and incentive programs to local districts, categorical funds for staff development. Those are all aimed at meeting the needs of specific schools—local districts and schools. Quite frankly, they are a drop in the bucket. In absolute terms, it is a lot of money; but in real terms, the number of teachers that we need to retrain and the number of teachers that we need to hire and recruit, we are unable to keep up with it.

Mr. **Ford**. We learned in Pennsylvania that they are using their own money to originate student loans for students that are screened for academic achievement to go into teaching and the health professions with a loan forgiveness that becomes total forgiveness if they teach for the required number of years in the Pennsylvania school systems. I don't know how big it is. It is the first one I have run into where a State is using resources that they have. In this case they are using the reserves that they have built up. She shows me how many there are that they have: 300,000 in forgivable loans, $1,500 a year for up to 4 years. The loan is forgiven by teaching 1 year for each year of assistance. No needs analysis. Also, a loan repayment program for current math and science teachers.

New York has $1.6 million in that. Even little Nebraska has $100,000 in a similar scheme. California, we are told, has $1 million for repaying up to $8,000 of outstanding student loan debt for current math, science, or bilingual teachers.

Mr. **Smith**. That is correct.

Mr. **Ford**. Then finally—and Bill Pierce will tell you this—I have had an interesting time over the years with the elementary and secondary program with State superintendents telling us that we should run the money through them. What normally is the relationship between your office and the colleges and universities in the State system? Do you have any supervisory role or administrative role with respect to them?

Mr. **Smith**. As you know, it varies from State to State. In California, the State superintendent is a member of the Regents of the

University of California and a member of the board of trustees for the State college system. Beyond that, most of our relationships have evolved as informal either staff level or the superintendent working with the chancellor or the president of the University of California.

In California, at the current time they are very amicable and there are a number of programs that are moving forward where there is a great deal of interest and cooperation between the State college system, State university system and the State department of education. Those tend to be informal and episodic. It depends upon the good will of all of the people involved.

I think the reaction that we are getting from State education agencies is that, in the past, most of the money that has gone for teacher training to schools of education has gone without any involvement at all of the State education agencies even though those agencies are responsible or are the spokesmen for the products of the schools of education.

So to answer your question, in California, we have no real formal control over that. It has to work out of the good will of the individuals involved.

Mr. FORD. But unfortunately, that is atypical of the pattern that you find in most of the States where indeed there is by tradition a clear separation between the responsibilities of the people who work in elementary and secondary education and the people who are involved with the colleges and universities. You have an integrated State college system. Texas has one. New York has a partial one. We don't have that sort of thing in most of the Midwestern States where our schools tend to be governed by independent boards, some appointed by the Governor, some elected statewide.

Strangely enough, in Michigan, the people who sit on the boards of our largest higher education institutions are elected in statewide elections just like a Governor There is a lot of argument about whether that makes sense or not, but it is the thing we have to live with. They don't, by constitution, have to listen to the Governor. I was in that convention writing the constitution, and I believe that we found that something more than half of the States tried to insulate their education system from direct involvement by the Governor.

In Southeastern States, it is exactly the opposite. If the Governor of Alabama wants a principal of a high school fired, he picks up the phone and it is done. And if he wants somebody promoted to principal, he picks up the phone and it is done. We would impeach a Governor in our State if he tried to interfere in that fashion, and I suspect you might in California as well.

Mr. SMITH. I don't think it would enter their mind in California to do something like that.

Mr. FORD. But if we were to start out a very small program, assuming that we may get in the first year 10 pilot programs across the country and then, jumping to the next conclusion, that California would get one, would you really want to pick the one school in California with a State official that has to be elected in that State, or would you rather have somebody else do that for you?

Mr. SMITH. Well, I think we wouldn't hesitate to take the responsibility of picking the one school that got it. I think the problem that we are trying to solve, we are not trying to control nor dictate what is taught in the schools of education or how it is taught. But let me give you an example of the problem that we face.

Bill Honig goes to State colleges in an effort to generate some enthusiasm for teaching, and at a recent one, at Heyward State, there was a group of about 100 individuals who had just completed their teacher training program to become elementary teachers. In California, you are required the fifth year to be credentialed. And he asked the group, "How many in this group have had a college-level course in children's literature?" About 90 percent of them had. Then he said, "How many of you have had a college-level course in mathematics?" Five of them had. "How many of you have had a course in physical education?" None of them had. And you can go on down the list.

Those people are required when they get in the classroom to teach those subjects; and if they have not had any training in those subjects, they are woefully unprepared. All we want to do is influence their training to make sure that they are prepared for the reality that they are going to experience when they reach the classroom.

I would recommend that you poll any random group of teachers and ask them if they feel that they were prepared for the situation they met in the classroom. And if you get 10 percent of them to say yes, I would be surprised. That is generally higher than I find with similar groups. So all we want to do is get a part of the action and have an opportunity to influence to shape those programs so that they do reflect the reality of the classroom.

Mr. **Ford**. Mr. McKernan?

Mr. **McKernan**. Thank you, Mr. Chairman. We have a vote on. I just have one question.

In your testimony, you talked about the things you are doing in California. I wonder how you would feel about some type of a national teachers center. Instead of trying to do too much from the Federal level, allow those States that do try to do that on a statewide basis to come to Washington or some other national center to interact with other teachers and try to expand on that a little bit. Could you address that?

Mr. **Smith**. I think that I would be generally supportive of that idea, something like the West Point of teaching. I think you would have to be cognizant of the fact that it would be unlikely that you could train enough teachers to make a real dent in the need. But I think that would go a long way toward boosting the prestige of the teaching profession so you would create, in effect, an elite corps of teachers from each of the States.

So I think if you recognize, really, how much it would accomplish and were clear about its purpose, we would support it. I think that would be a good idea.

Mr. **McKernan**. My concern is that perhaps it would work better to have the States doing their own programs, but have people who could go back to those programs and have the activities of other States and experiences of other States to work with.

I would like to ask you one final question on the issue of teachers centers. One of the things that is being started in my State of Maine in a couple of areas is the idea of teacher academies. A couple of the local school districts in the bigger communities have tried to use teachers who have the respect of their peers, who are obviously the best teachers, to bring in other younger teachers to talk about not so much the academics as the theory of teaching and the best way to get the most out of students, how to make it interesting. This is being done in conjunction with the university system, but more through the State board. How do you feel about that?

Mr. **Smith**. I think that is a good idea. Teachers are the best teachers of teachers, and when you add in the academic faculty from universities, who are often those experts who know the content and are able to bring the content alive, you have I think the ideal combination: People who know how to teach it, people who know the subject matter—working together as colleagues, not as the university professor lecturing to the teacher. That is the kind of thing that we are doing at UCLA this summer, and I could bring you 100 teachers' testimony about what a great experience it is and how much they have gotten out of it. I mean, I think that sort of thing is excellent, and it is not, in the overall scheme of things not a very expensive way to do it in relative terms.

Mr. **McKernan**. Thank you. Thank you, Mr. Chairman.

Mr. **Ford**. Thank you.

We will have to recess for a moment to vote on the foreign assistance conference report.

[Recess.]

Mr. **Ford**. Our next panel consists of Robert F. Chase, teacher, Rogers Park Junior High, Danbury, CT, representing the National Education Association; Ms. Marilyn Rauth, executive director, Education Issues Department, American Federation of Teachers, Dr. Norene Daly, dean, College of Education, Florida-Atlantic University, representing the American Council on Education and the American Association of Colleges of Teacher Education; Dr. Willis Hawley, dean, Peabody School of Education, Vanderbilt University, representing the American Association of School Administrators; and Ms. Irene Spero, associate for government relations, the College Board.

Without objection, your prepared testimony will be inserted in the record. And we will start with Mr. Chase.

STATEMENT OF ROBERT F. CHASE, TEACHER, ROGERS PARK JUNIOR HIGH SCHOOL, DANBURY, CT, REPRESENTING THE NATIONAL EDUCATION ASSOCIATION

Mr. **Chase**. Good morning, Mr. Chairman. Thank you very much for giving me the opportunity to be here this morning to testify on behalf of the National Education Association as a member of its executive committee. As a junior high school social studies teacher for 19 years, I want to thank you for this opportunity to address an issue of great personal interest to me, teacher education and training programs.

I might add parenthetically, Mr. Chairman, that indeed I am, one, a registered voter, and second, my students have for many years during election years volunteered and worked with both political parties on their campaigns for extra credit, so they are well aware of the political process and it does get pushed exceedingly hard in the school in which I teach and in my classrooms.

Mr. **Ford**. I had a "Fritz" pin on and a teacher and officer of your association in one of my school districts asked me what it was. I explained that her association of which she was a local officer had endorsed him as candidate for President, and that is when she told me what she thought about voting, had never even bothered to register. And I wasn't joking when I said, "Well, what do you teach?" and she told me social studies. It really happened. That tends to make an impression on me.

Mr. **Chase**. I just had to mention that there are those of us who don't fit that image.

In the midst of a nationwide education reform movement, we face mounting teacher shortages fueled by increasing elementary school enrollments, the inability to retain experienced teachers or to attract new ones because of low pay, a shrinking pool from which to draw potential teachers, undesirable working conditions, and the low esteem in which the profession itself is held.

While the need for teachers now and in the coming years can be characterized by the word "more," there is an equally important demand for better teachers as we seek to achieve excellence in education. NEA believes that the reauthorization of title V of the Higher Education Act offers a timely and unique opportunity for us to address some of the issues surrounding these needs.

The association has long worked for rigorous certification standards, quality teacher education and continual education renewal for classroom teachers. Our efforts have been driven by the single belief that excellence in education cannot be achieved without quality teaching. Today there are more than 1,300 institutions training teachers in this Nation. Yet, many have been and continue to be plagued by low standards for accepting and retaining students, inadequate institutional support for education departments, a low image in the eyes of college administrators and faculty and of the departments, and a lack of strong, clear standards for professional education to prepare teachers.

NEA believes preparatory programs can be improved. One important step in accomplishing this is through a better connection between a college education faculty and K-12 classroom teachers. The relevance of education courses to effective teaching is enhanced when teachers in today's classrooms are involved in advising on course content and offerings or serve as lecturers or visiting faculty.

We further believe that the following redesign of title V will yield a Federal assistance program that will advance this Nation's goals of producing well-qualified teachers that will bring us closer to our national goal of educational excellence.

NEA recommends that part A of the Higher Education Act be focused on excellence in teacher education, the purpose of which would be to provide incentives for teacher education programs, to move quickly and decisively to strengthen their professional education programs. Funds in this part should go to higher education institutions for the design and implementation of high quality teacher education programs and particularly to those which encourage teacher candidates from diverse ethnic and racial backgrounds.

Programs under part A should strive to strengthen both a general studies and professional education courses for teacher candidates working cooperatively with other departments or colleges within the institution. These programs should ensure that a variety of clinical teaching experiences are incorporated in the program of studies. Additionally, grants would be awarded to institutions of higher education for creation of programs that would promote school, college, and university partnership programs to improve teacher education. These would include joint projects between higher education institutions and local education agencies to cooperatively assist the beginning teachers, provide clinical experiences for teacher candidates and explore the practical application of educational research and evaluation, as well as to involve teacher education faculty and students in school site projects.

Part B, professional development resource centers should be created to respond to the acute need for professional development and renewal among classroom teachers. Over the years, studies have stressed the need for such professional support for practicing teachers. I speak from personal experience when I say that teachers need an adaptable mechanism to renew and refresh their teaching skills, subject matter expertise, and to foster collegial support. The creation of professional development resource centers would provide a year-round opportunity for personal professional development and collegial assistance in problem solving. They should be fashioned after H.R. 1382, a bill which you, Mr. Chairman, introduced and one for which we highly commend you.

The demands of the classrooms of the eighties with their increasingly diverse student populations and learning needs and the ability to teach all youngsters successfully require many ingredients. Teachers stand to benefit enormously from working with their peers through such professional centers. These centers should be locally designed and driven. They should have programs responsive to the needs of their teacher clientele. For maximum use and benefit, these programs should be developed by and for teachers.

In addition to this critical program, the NEA suggests that summer institutes should be added to provide summer development opportunities to classroom teachers and college faculty. These institutes, or summer workshops, can be of particular value in focusing intensively on a few specific areas rather than the variety of areas that can be dealt with in the professional development resource centers. For most teachers to be able to benefit from these institutes, it is critical that stipends be offered so that teachers will be able to attend. The public myth is that teachers have the summers off, and I am sure as you know the reality is that most teachers must work in the summer for their economic survival. In addition, a small portion of title V funds should go to data collection and research to better inform these other activities of title V.

We also wish to express support for the Carl D. Perkins Scholarship and Talented Teacher Fellowship Program already authorized in title V. We believe these programs merit the committee's support and assistance in obtaining funding.

Finally, we support the proposal that the leadership in educational administration programs should logically be included in title V. School effectiveness research clearly supports the notion that good educational leadership is important to support good teaching. Federal participation is a must in seeking answers to the problems of attracting and preparing talented teachers and to ensuring their continued development after they have entered the classroom.

Excellence in teaching produces excellence in education, which translates into the basic ingredients for a vibrant economy, and adequate national defense and a healthy democracy. To do nothing now on this important subject will cost the Nation dearly, and it will be at the expense of this country's future.

Thank you very much.

[The prepared statement of Robert F. Chase follows:]

PREPARED STATEMENT OF ROBERT F. CHASE ON BEHALF OF THE NATIONAL EDUCATION ASSOCIATION

Chairman Ford and members of the Education and Labor Subcommittee on Postsecondary Education: My name is Robert F. Chase and I am here to testify on behalf of the National Education Association (NEA) and as a member of its Executive Committee. As a Danbury, Connecticut, junior high school social studies teacher, I want to thank you for this opportunity to address an issue of great personal interest to me—teacher education and training programs—and what Title V of the Higher Education Act can accomplish to enhance these.

NEA's 1.7 million members are classroom teachers, higher education faculty, and education support personnel in public schools and postsecondary institutions in each of the 50 states.

In the midst of a nationwide education reform movement, we face mounting teacher shortages fueled by increasing elementary school enrollments, the inability to retain experienced teachers or to attract new ones because of low pay, a shrinking pool from which to draw potential teachers, undesirable work conditions, and the low esteem in which the profession itself is held.

There has been much criticism of the low levels of student achievement in our nation, the unchallenging and "flabby" curricula that permeate some of our school classrooms, and what and how students are taught.

All of these factors reflect on teachers. And all of them directly relate to the talent attracted to the teaching profession, the quality of training which teachers receive, and the environment and conditions in which teachers practice, including the degree to which their continued professional development is fostered.

NEA believes that the reauthorization of Title V of the Higher Education Act offers a timely and unique opportunity for us to address some of these issues and problems from a public policy perspective.

Though the education reform movement sweeping across the country today has provided a more recent impetus for this nation to focus on teacher training, the NEA's history is a chronicle of teacher improvement efforts in this nation.

NEA established the National Commission on Teacher Education and Professional Standards (TEPS) in 1946 to help elevate certification standards and to eliminate substandard credentials when only 60 percent of the country's teachers held bachelor's or higher degrees in education. Its efforts met with much success.

In 1954, NEA helped create the National Council for Accreditation of Teacher Education (NCATE)—an independent national accrediting agency for teacher education. In June of this year, NCATE issued a reform plan developed in cooperation with NEA and designed to revolutionize teacher education by setting significantly tougher standards for obtaining accreditation.

At our convention held earlier this month, NEA again asserted its leadership in this arena by taking a strong stance for rigorous teacher certification standards reflecting our belief that no candidate should be certified to teach until he or she successfully meets or exceeds certain requirements.

The NEA Representative Assembly addressed the controversial issue of teacher testing. For the last two years, there has been a national preoccupation with teacher testing. We fear that testing will increasingly be viewed as the panacea to the problems in teacher education. While testing is valid, its rightful role is at the certification stage of a teacher's career. Classroom evaluations—not paper and pencil tests—are the key to assessing the skills of current teachers. Let me underscore that there is no room for incompetence in America's classrooms. That is why NEA strongly supports evaluation systems that help teachers teach.

These efforts clearly demonstrate the Association's ongoing attempts to motivate and encourage teachers to govern their profession in a responsible manner.

And they stand as symbols of our overriding belief that excellence in education cannot be achieved without quality teaching and that quality teaching is elusive without quality teacher preparation and professional development programs.

THE CHALLENGES AHEAD

Several pressing facts suggest that we can no longer just talk about or study these issues and problems affecting the quality of education—something must be done.

In the midst of a nationwide education reform movement, we face mounting teacher shortages fueled by increasing elementary school enrollments, the inability to retain experienced teachers or to attract new ones because of low pay, a shrinking pool from which to draw potential teachers, undesirable work conditions, and the low esteem in which the profession itself is held.

The U.S. Census Bureau recently reported a nine percent increase in the number of preschool children in the country since 1981. The birthrate began to climb in 1977, and this year there were 54,000 more elementary school students in the nation's classrooms. This growth is expected to continue into the 1990s, according to the National Center for Education Statistics. NCES predicts that enrollment in kindergarten through grade eight will grow from the current 26.6 million to 30.5 million by 1993.

At the same time schools will be facing an additional crisis—a shortage of classroom teachers. The baby boom echo now being heard has created the need for an additional 250,000 teachers within the next five years alone. But the shortage problems are compounded by other factors.

While elementary school enrollments swell, the pool from which potential teachers can be recruited will be shrinking. By 1990, the number of 18-year-olds will be almost a million fewer than in 1980.

More teachers will be needed to fill vacancies created by the growing number of teachers leaving education for higher paying jobs in business and industry or going into retirement. This is aggravated by the fact that colleges and universities are unable to attract enough potential teacher candidates.

These combined factors spell an anticipated shortage of approximately 900,000 teachers within the next five years.

When making career choices, individuals are influenced by the degree of esteem accorded to that occupation. That esteem is measured by salary, professional respect, and the working conditions which serve as a central foundation for professional practice. As the Carnegie Foundation for the Advancement of Teaching declares in its report on secondary education:

> We cannot expect teachers to exhibit a high degree of professional competence when they are accorded such a low degree of professional treatment in their workaday world. Nor can we attract the best and the brightest into teaching when they have had twelve years of opportunity to observe first hand the daily frustrations and petty humiliations that many teachers must endure.

The point is that we are not attracting the finest students to teaching. Students who major in education today tend to be the least prepared. On such measures as the Scholastic Aptitude Test, those who plan to go into education rank last in performance in every ethnic group surveyed nationally. Fewer than half the newly hired teachers in English and math are certified in those fields. We are also not attracting potential teaching talent from ethnically and racially diverse segments of our population while student enrollments are increasingly multiracial and multiethnic. The fact that fewer of our ethnic and minority students are entering college will heighten this lack of heterogeneity among new teachers. Furthermore, we are not even able to retain the finest teachers among those we do attract to the profession.

This problem often stems from the fact that teachers find themselves working in improper facilities for learning, lacking materials and equipment to do an effective job, and attempting to teach to students in overcrowded classrooms. For that, their starting pay in 1984 was $14,500, compared to $26,800 for engineers. None of these conditions serves as a magnet to the profession.

Today, there are more than 1,300 higher education institutions training teachers in this nation. Yet many have been and continue to be plagued by low standards for accepting and retaining students; inadequate institutional support for education departments; a low image in the eyes of college administrators and faculty in other departments; and the lack of strong, clear standards for professional education to prepare teachers.

NEA has no doubts that preparatory programs can be improved. One important step would be to assure better connections between the college education faculty and K-12 classroom teachers. The relevance of education courses to effective teaching is enhanced when teachers in today's classrooms advise on course content and offerings or serve as lecturers or visiting faculty.

TITLE V RECOMMENDATIONS

A redesign of Title V of the Higher Education Act would provide a substantive and constructive beginning to begin to address these current problems and concerns. Let me share with you NEA's vision of what this legislation can do to improve teacher education opportunities.

Part A. Excellence in Teacher Education

NEA recommends that Part A of the Higher Education Act be renamed Excellence in Teacher Education. It should provide incentives for allowing teacher education programs to move quickly and decisively to strengthen their professional education programs.

One part should provide grants to institutions of higher education directed at:

The design and implementation of high quality teacher education programs with high admissions criteria and which encourage talented students from diverse ethnic and racial groups to enter their programs;

The development of teacher education programs involving cooperative programs among consortia of institutions of higher education in order to promote diversity and higher quality curricula;

Cooperative projects and programs involving faculties of liberal arts and sciences and faculties of education to revise and strengthen general studies and professional education programs and provide a better coordination between them, including programs incorporating a variety of clinical experiences;

Development for nontraditional teacher education students of alternative professional preparation programs but which retain the same graduation standards; and,

The development of programs to train existing teachers and school personnel in new technologies.

NEA believes the partnerships between K-12 schools and colleges and universities must be encouraged as a quality control on teacher training curricula content. We further believe that the development of collaborative relationships between colleges of education and elementary and secondary teachers and administrators will further educational excellence. We recommend that a second part of Part A be aimed at School, College and University Partnerships. Its goal should be to foster:

Joint projects between local education agencies and institutions of higher education to provide programs of assistance for beginning teachers;

Clinical experience programs for teacher education candidates which are interspersed throughout their training program and involve classroom teachers from the school site;

The design of staff development units involving teams of faculty and postsecondary teachers and/or administrators to work together on school site projects; and,

Projects involving college and university faculty and elementary and secondary school faculty in exploring the practical application of educational research and evaluation findings.

These partnership efforts should be funded through a 30 percent set-aside of Part A to insure that these types of activities are given appropriate funding priority.

Teacher education programs are essential as a foundation for practice. But as one whose workaday world is the school classroom, there is no doubt in my mind that learning must never end if one is to be an effective teacher. A competent professional teacher must be able to share and compare his/her classroom experiences to refine and develop the best teaching strategies—the best way to insure that students learn. At the same time, an effective teacher—like any other professional—must keep abreast of new developments, new information that will make a difference in his/her job performance. This kind of professional development is a prerequisite to "mastery" in teaching. I view it as an important safeguard against a "flabby" curriculum, ineffective instructional techniques, and low student interest and achievement. Professional development is also an insurance policy against the considerable problem of teacher burnout.

As a recent Carnegie Foundation report, describing the multiple and varied duties of the average classroom teacher, points out:

"Strikingly, while performing these myriad duties, teachers spend little time in the company of other adults. This one condition may, in fact, separate teaching from most other professions. The combination of the self-contained classroom and a heavy teaching schedule gives teachers few opportunities to share common problems or sustain an intellectual life."

From a more practical standpoint, the importance of ongoing professional development is found in examining what teachers face in the 1980s. They deal with an increasingly diverse school population—a population which includes the rich and the poor, the advantaged and the disadvantaged, the native-born and the most recent immigrants, the gifted, the average, the handicapped, the limited-English speaking. Add to that mix the increasing numbers of young "walking wounded" who are chemically-dependent, emotionally disturbed, victims of child abuse or family stress. Consider, too, that each child is different from another in terms of his/her social, psychological, and intellectual needs and abilities.

Facing so many varied students, day in and day out, and insuring that they learn requires critical thinking skills, subject matter expertise, a sense of fairness, the application of good classroom management techniques, the application of creative ideas and new teaching strategies, curriculum innovation, and the application of developing technologies. You don't acquire any or all of those skills in a vacuum. You don't acquire them in a few years of college education courses or by staying isolated in the classroom in perpetuity. You gain those skills through constant and continual interaction with your colleagues and other educators and adults. You gain them through learning experiences in both formal and informal education settings. And you acquire them through constant renewal of those strengths with which you entered the profession.

Part B, Professional Development Resource Centers

NEA recommends that federal support be directed to the continuous improvement of teacher professional skills and specialty and subject matter expertise through establishment of a newly named Part B—Professional Development Resource Centers.

As Donna Kerr of the Institute for Advanced Study at Princeton University views the current state of teacher affairs:

"There is a disturbing duplicity in a society that itself fails to create the conditions that would foster teaching competence and then complains of incompetent teachers."

Over the years, studies have stressed the need for such professional support for practicing teachers. Teachers need an adaptable mechanism to renew and refresh their skills and foster collegial support. PDRCs would provide year-round opportunities for personal professional development and collegial assistance in problem-solving. They should be fashioned after H.R. 5586—a bill which you introduced, Mr. Chairman, and one for which you should be highly commended.

Such centers could use a variety of resources including faculty specialists, business and public service representatives, and community leaders to assist teachers in group and individual activities. Most importantly, they can use teachers themselves as instructors of their colleagues.

The demands of the classroom of the 80's and the ability to teach all youngsters successfully require many ingredients and teachers stand to benefit enormously from working with their peers through such Professional Development Resource Centers.

Those centers should be locally designed and driven. They should enable and encourage local education agencies to offer a program responsive to practicing classroom teachers' needs. They should be professional education developed by and for teachers.

Part C, Summer Institutes

NEA also believes that federal grants to operate summer institutes and/or workshops for teachers and college faculty are useful elements in continuing professional development. They can be particularly valuable to focus intensively on a few specific areas rather than the variety of areas that can be dealt with in the Resource Centers.

Classroom teachers and/or faculty should be consulted beforehand to help identify the objectives of the institutes. It also is important that adequate stipends be offered to enable teachers to attend. There is a public myth that teachers have the summer off. The reality is that teachers must work in the summer for their economic survival, and, if they are lucky, for their professional growth.

Part D, Data Collection and Research

Part D, Data Collection and Research, should be added to Title V. The nation's teaching force is changing rapidly as the highly experienced depart through retirement, the younger teachers leave for other occupational opportunities, and the numbers of those entering the profession decrease. Current data on supply and demand for education professionals, both their numbers and subject matter expertise, are essential to informed policy decisions. Support for data gathering and statistical analysis will enhance the program effectiveness of activities under Title V.

Finally, we wish to express support for the Carl D. Perkins Scholarship and Talented Teacher Fellowship Program already authorized in Title V. We believe these programs merit the Committee's support and assistance in obtaining funding.

The Leadership in Educational Administration Program also should be included in Title V, where it logically fits. School effectiveness research clearly supports the notion that good leadership is important to support good teaching.

Mr. Chairman, the crisis in teaching must be addressed for the good of education and the continued well-being of this nation. A restructured Title V, as outlined here, would begin the process of revitalization which must occur if we are to achieve our goals of educational excellence.

Federal participation is a must in seeking the answers to the problems of attracting talented teachers and of their continued development. Excellence in teaching produces excellence in education which translates into the basic ingredients for an adequate national defense, a vibrant economy, and a healthy democracy. To do nothing now on this important matter will cost this nation dearly, and it will be at the expense of this country's intellectual future. This Committee has an important responsibility to fulfill.

Thank you.

Mr. GOODLING. Mr. Chairman.

Mr. FORD. Yes?

Mr. GOODLING. I have to meet with our trade representative at 12. Could I just make one comment Mr. Chase might take back to his leader?

Mr. FORD. Certainly.

Mr. GOODLING. I think Mary Futrell is giving your organization, and what used to be my organization, the direction that it has needed for a long, long time, and I am glad that she came along when she did. You might take that along back.

Mr. CHASE. We are, too, and thank you very much.

Mr. FORD. Thank you.

Marilyn Rauth.

STATEMENT OF MARILYN RAUTH, EXECUTIVE DIRECTOR, EDUCATION ISSUES DEPARTMENT, AMERICAN FEDERATION OF TEACHERS

Ms. RAUTH. Thank you. I am pleased to have the opportunity to give you some ideas of the American Federation of Teachers on the problems facing us in recruiting and retaining quality people in the teaching force.

I think it is clear that "A Nation at Risk" and subsequent reports have provided the impetus for what we consider to be potentially the most significant reform movement in the history of public education, and yet we are facing the dilemma in the coming teacher shortage. At the same time we are involved in raising standards, the shortage could easily result in an abandonment of the standards, meaning that all efforts to date to produce meaningful change in education, to produce optimal quality in education, could be for nothing.

I am sure you are aware of the fact that as many States have begun the process of upgrading certification requirements, of approving their evaluation systems, they are simultaneously beginning plans for next year to waive certification requirements in those areas where teachers cannot be found. Well, if that is allowed to continue, as I said, it makes all of the efforts over the last several years to move us in a new direction in the schools in creating a new, professionalized teaching force, makes that all moot and for naught.

So we would like to make some suggestions of what the Federal Government might do to contribute to maintaining the momentum which has begun. First, we think that the Carl Perkins scholarships funded by the last Congress should be given priority in appropriations. Now it is clear that if this is all that is done, it is not going to have the effect desired. You simply cannot provide incentives to bring people into a profession where the working conditions, the rewards, the remuneration systems do not provide equal incentives to remain. So that while we believe these scholarships, while we think that the Federal Government should be looking at loan forgiveness programs in return for a certain number of years spent in the school, we also believe much more has to be done.

And that is, first, in terms of attracting good people to education, they have to know that they are going to be provided with intellectual stimulation and challenge. They have to know that this is an accomplishment, moving into the teaching profession, which is going to be recognized by society and which is going to be rewarding to their own sense of learning, to their own sense of development.

We would propose that the Federal Government provide funds for some model and experimental programs which would establish teaching academies. And it is interesting it was mentioned earlier today as one possibility. We see these teaching academies as being established by a consortia of postsecondary institutions, the school system, and the teachers in that school system or in a collective group of school systems. At the academy, outstanding teachers who have been carefully selected, who have received special training in how to work with adults, who have been trained in the important elements of beginner teacher training, will serve as adjunct faculty for the university, provide their practical experience as well as the theoretical background, meaning the whys of teaching—not only what you teach, how you teach it, but why you are teaching it—in conjunction with university faculty so that there is an internship period for beginning teachers. That we no longer subscribe to the anachronistic process of sink-or-swim for the beginning teachers. That they come in, are given rigorous training, are evaluated, screened carefully by practicing teachers as well as others, and that when certification is finally given to teachers we know that that means something. That we know that we have capable people who not only know their subject matter but know the very complex skills of teaching—the pedagogy.

Teachers who are working in this capacity as consulting teachers or adjunct faculty in the teaching academies might also have other roles. In addition to teaching students at the school in which the academy is located, in addition to working with beginning teachers, they might conceivably have other rules, such as the development of new curriculum, research on their own in terms of school effectiveness or teaching effectiveness. There are a lot of possibilities—staff development for other teachers in the school.

So the teaching academies are important in guarding the entry level of the teaching profession, and we think that Federal funds which would provide model academies, model programs, would be very effective. But it is not enough. If we are going to keep these capable people in teaching, that intellectual environment of learning has to continue throughout their careers. It is rather ironic that we expect teachers to instill the love, the joy of learning in students and yet we send no signals, provide few opportunities for them to actually continue in that process themselves.

We would like to see effective teaching resource centers either as an adjunct or as a part of the teaching academies which would provide much more than the one-shot workshop that has been mentioned earlier as totally ineffective, other than simply raising consciousness. If we want to change practice, we have to provide ongoing, indepth experiences with ideas, whether it be in the subject matter area or in effective teaching or effective schooling.

We think that these centers ought to be run by teachers and involve postsecondary institutions' business and community representives so that there is shared input into the staff development in schools. We think that they ought to focus on effective teaching in schooling, on research-based knowledge in those areas, looking at things like good classroom management techniques, effective schooling, effective teaching, critical thinking, educational technology and instruction, curriculum development, testing. I think we could avoid a lot of the pitfalls of some few of the teacher centers in the past. That is, that their curriculum became weak in some instances. We had guitar playing, leisure activities for teachers. It is all fine and good, but the Federal Government could overcome the criticisms of this model in staff development, which overall was extremely effective, by putting some parameters on what it is that is to be done in these centers.

So we throw those out as a few ideas. We have submitted written testimony where we flesh those out in a little more detail. And I would be glad to take questions.

Mr. FORD. Thank you.

[The prepared statement of Marilyn Rauth follows:]

PREPARED STATEMENT OF MARILYN RAUTH, EXECUTIVE DIRECTOR OF EDUCATIONAL ISSUES, AMERICAN FEDERATION OF TEACHERS, AFL-CIO

Mr. Chairman and Members of the Subcommittee: I am Marilyn Rauth, Executive Director of Educational Issues at the American Federation of Teachers. On behalf of the AFT I want to thank you for this opportunity to testify on issues relating to Title V of the Higher Education Act. I would also like to convey the AFT's appreciation for the Subcommittee's continuing leadership and hard work to defend and improve postsecondary education.

Al Shanker, President of the AFT, has stated, "The major struggle in education over the next period will be attracting and retaining good teachers." His statement recognizes the fact that prospective teachers are drawn increasingly from the lower registers of the academic scale. Education can no longer depend on the social constraints which once gave talented women and minorities no other professional option but teaching. Such individuals now have other choices. However, within the next few years roughly one-half of the teaching force, or over 1 million people, will have to be replaced. This critical demand for additional teachers will intensify the need to attract higher quality entrants into teaching. It will be very difficult to go against the laws of supply and demand and raise entry standards in a time of shortage of teachers.

In a period of budget deficits and program cutbacks it is hard to envision new federal program initiatives. Yet, the federal government does have a legitimate concern and a role in addressing the shortage of qualified teachers. The problem is clearly a national one, with strong implications for the national economy and security. The AFT would like to outline some proposals which, while relatively modest in cost and scope, are clearly within the federal purview and could be enormously beneficial to education and the country. I would like to speak about the recruitment, training, and retaining of teachers.

Once again, the problem will recruitment is that too few of the more academically able students are attracted to teaching. Several possibilities exist for federal initiatives to lessen the problem or to test promising responses to the shortage. One is to motivate incoming college freshmen, more specifically those students who placed at the top of their high school classes, with scholarships to cover all or a major part of their college expenses. Remission of scholarships cost is then based on years of service in teaching. This idea was embodied in the Carl Perkins Scholarships, passed by the last Congress. The AFT strongly supported enactment of that legislation and believes it should be a priority for funding.

A similar concept is to attract recent college graduates of high quality into at least temporary teaching, especially in subject areas of acute shortage, with a program to repay loans or finance additional education. An infusion of bright, energetic graduates, perhaps for a period of only five or six years for each individual, would substantially raise the calibre of new teachers. Working to repay loans, to meet scholarship obligations, or to fulfill personal idealism, these talented recruits could make a contribution to teaching without necessarily making a career commitment. Of course, they should be trained and work under the guidance of experienced teachers.

It will not be possible to attract sufficient numbers of academically able students into teaching as a career without significant changes in the salaries, status, and working conditions of teachers. Students who have other options available to them will demand competitive salaries and the treatment and recognition accorded professionals. This includes the opportunity to exercise professional judgement, to make real educational decisions, and to avoid factory-like authority structures. All of this is to say that attracting and retaining highly qualified teachers involves complex issues and the mobilization of resources at many levels.

Another area of concern, and my major point today, is the training of prospective teachers. Much of what now passes for teacher training is truly irrelevant to the challenges faced by practicing teachers. Education is probably the only profession in which the practitioners freely admit that very few of their professional preparatory courses actually prepared them for the realities of the job. One source of the problem is that teacher training usually does not adequately involve experienced career teachers in the training of new teachers. Another source of the problem is that new teachers are not introduced to their work in a programmatic, structured way which combines the support and guidance of more experienced teachers with gradually increased levels of responsibility. Practice teaching does not fill the bill, as it is generally an artificial experience, over a short span of time, without a real sense of responsibility.

The AFT would like to see an experimental, federal program to fund what might be called Teaching Academies. Funding should be made available on the basis of competition among proposals. As I see it, a proposal seeking funds for a teaching academy would have the following features: It would be initiated by a consortia including a postsecondary institution and one or more local school districts and their teachers. Functioning along the lines of an internship program, it would employ experienced, practicing teachers as adjunct faculty in the training of prospective teachers. Like other professionals, these senior teachers would perform dual roles as practitioners and as educators of new professionals. Their employment, responsibilities and compensation would be divided, as appropriate, between the postsecondary institution and a local school system. Outstanding teachers could rotate in serving as adjunct faculty. Of course, their roles could be broadened to participate in research, evaluate textbooks, design curriculums, and other functions in addition to assisting new teachers. A federal program of competitive grants should allow sufficient leeway to encourage innovation.

For their part, aspiring teachers would have much greater opportunities for planning, trying things out, seeking guidance, observing different teachers, developing collegial relationships, and gradually assuming greater levels of responsibility as teachers. They would move away from the present "sink or swim" mode of beginning teaching and would be less subject to the pervasive isolation which afflicts teachers. They would be able to balance intellectual attainment with opportunities for practice and improved performance. Such a program, the AFT believes, could provide vastly improved preparation for prospective teachers. It also could do much, by way of promising useful training, to attract more academically able candidates to the profession.

In addition to the recruitment and training of more academically qualified students to become teachers, there must be improved inservice training programs for teachers already in the classroom. The need for improved inservice training programs will become more evident as turnover of teaching staffs accelerates and as pressure increases to hire marginally qualified personnel to meet the teacher shortage. The AFT has previously submitted to the Subcommittee its written suggestions for Effective Teaching Resource Centers. Based on our experience with federally funded Teacher Centers, those suggestions were put forward in the effort to improve upon that program and to address some of the criticisms raised against it.

Briefly, our suggestions were as follows: First, the activities of such centers should be clearly directed toward improving effectiveness in teaching. This effort should not be displaced by exercises in mundane classroom skills or by leisure activities conducted for teachers. Second, such centers should actively disseminate recent, research-based knowledge about improved ways of teaching. Much has been learned from research on effective teaching, classroom management, effective schools, critical thinking, educational technology, curriculum development, testing and other skills that could be transmitted to teachers in a usable form. Third, the governance base of such centers should be broadened to include greater representation from the surrounding community. For example, in many areas business leaders have recently demonstrated a great willingness to help improve schools. Broadening the base would also serve to blunt any criticism that a center might be dominated by a particular interest group. Centers in which teachers have an opportunity for collegial exchange and are provided a non-threatening, supportive environment to improve their skills are a great resource for education. They are enthusiastically supported by the AFT.

In my brief testimony I have attempted to address some of the issues in teacher preparation and to present some of the AFT's proposals for dealing with these issues. We believe there is unquestionably an important federal role here, even in a period of budget constraints, and look forward to working with the Subcommittee on these and other issues.

I will be happy to respond to any questions.

Mr. Ford. Ms. Daly.

STATEMENT OF NORENE DALY, PH.D., DEAN, SCHOOL OF EDUCATION, FLORIDA-ATLANTIC UNIVERSITY, REPRESENTING THE AMERICAN COUNCIL ON EDUCATION AND THE AMERICAN ASSOCIATION OF COLLEGES OF TEACHER EDUCATION

Ms. Daly. Good morning, Mr. Chairman, and members of the subcommittee. I am pleased to be with you to discuss options for the reauthorization of title V of the Higher Education Act. I am president-elect of the American Association of Colleges for Teacher Education, an association which represents 725 public and private schools, colleges, and departments of education. However, today my testimony is also on behalf of the American Council of Education, the association which represents those institutions as well, and my testimony reflects the views of a number of higher education organizations participating in a 2-year effort to develop reauthorization recommendations for this title.

Last February, I am sure you will recall, the National Commission for Excellence in Teacher Education issued their report, "A Call for Change in Teacher Education." In that report the Commission stated ". . . every part of a teacher's education—from the liberal arts programs of the prospective teacher to the continuing education of the veteran—can be improved; even the best existing programs are not good enough. Yet, we recognize that many efforts to improve are underway, and we urge that these be supported and reinforced." It is that support and reinforcement that I would wish to address today.

There are many challenges facing teacher preparation institutions: current research findings must be integrated into education programs; undergraduate and graduate curricula must be modified to meet new technologies and practitioner needs; the entire college or university, and not just the school, college or department of education, must assume responsibility for the preparation of new teachers, and we must work more closely with practitioners and administrators to provide high quality professional development. We believe that a new title V of the Higher Education Act focusing on preservice teacher education and professional development activities with an emphasis on school, college, and university partnerships can help us meet these challenges. The higher education community has developed a position statement that reflects our consensus on these issues and a copy is included, for the record, as an appendix to my testimony.

Four themes constitute the framework for our recommendations on the reauthorization of title V:

First, we urge that teacher preparation programs be strengthened, and that this strengthening will be most efficiently accomplished by encouraging and promoting change at the college or university where students receive their undergraduate or graduate education.

Second, anticipating that limited Federal support for new initiatives will be available, resources should be targeted to those activities where the greatest leverage may be exerted.

Third, programs to assist entry-level and career teachers should be developed and administered cooperatively between institutions of higher education and local school personnel.

Fourth, new Federal programs should be implemented quickly and decisively.

In my statement today I will briefly speak to each of these four themes.

First, strengthening teacher preparation programs. The education of prospective teachers must continue to be centered in colleges and universities which provide structure for the systematic study of knowledge as well as scholarly inquiry and intellectual discourse. Title V was designed with this in mind and it serves as a rationale for teacher education's inclusion in this title of the Higher Education Act. In addition, higher education itself must assume and be committed to the continued revitalization of programs to prepare teachers. Research in the 1960's and 1970's has expanded the knowledge base undergirding teaching and learning.

I was interested, Mr. Chairman, in your comment earlier regarding the length of time that it takes to implement new concepts in teacher education. Schools of education, like schools generally, are dynamic and not static institutions, and they have changed. There have been a great many changes over the last two decades. We know much more now about how to prepare teachers, and I think we are doing a much better job.

In the 1960's and the 1970's, that knowledge base that undergirds teaching and learning expanded tremendously, and as a result of this teacher education today can be considerably different from teacher education of a decade ago or two decades ago. Recognition of the validity of this knowledge base, coupled with modest Federal support, will allow us to begin to design and institutionalize new and improved teacher training programs.

This subcommittee and the House Committee on Elementary, Secondary, and Vocational Education have given strong bipartisan support for adequate funding for elementary, secondary, and postsecondary education, and you know better than most the extent to which all of us have suffered losses in Federal program support. However, with the inclusion of the previous title V programs into the chapter 2 block grant and with accompanying cuts in other personnel preparation programs, during the last 4 years Federal support for teacher training has declined more than 25 percent, and this at a time when there is a compelling need to train teachers.

Compounding this is a situation documented by Peseau and Orr in 1980, and this was highlighted in the report of the National Commission for Excellence in Teacher Education. That is, professional schools and departments of education are traditionally funded at significantly lower levels than other higher education programs such as medicine, law, business, and so forth. Therefore, while schools, colleges, and departments of education are faced with a diminished resource base, they are expected to be responsive to calls for promoting excellence, to retain a commitment to equity, to complete with other professional programs for their share of talented students, and to respond with new programs to meet the changing technological needs of practitioners, all of this at a time when, as you have so aptly pointed out, Mr. Chairman, the profession of teaching has become increasingly less appealing.

Modest grants to institutions of higher education to stimulate program change will generate long-term benefits. This strategy has been effectively used by the fund for the improvement of postsecondary education, as well as through the Education of the Handicapped and Bilingual Education Acts. New programs supported by similar grants might promote cooperative efforts between faculties of liberal arts and faculities of education to revise and strengthen general studies and professional programs. They could be used to design alternative professional preparation programs for nontraditional teacher education students such as the program outlined by Representative Chandler, or they could be used to provide support for consortia of institutions within a region to coordinate teacher training activities.

Again, to address the issue of limited resources. While the preparation of qualified teachers is critical to the maintenance of a strong educational system, we appreciate that fiscal constraints facing the Congress may not allow optimum funding for teacher preparation at the present time. For that reason, our recommendations differ from some of the suggestions of our professional colleagues, although there is great congruence. We propose Federal support for a series of carefully defined activities with specified outcomes that will allow institutional flexibility while providing accountability to the Congress. We propose the Congress set a modest authorization level of $75 million to be distributed among four programs: First, institutional support for teacher education in the amount of $30 million; summer institutes, $18.75 million; school, college, and university partnerships, $22.5 million; and data gathering, $3.75 million.

We do not expect nor do we recommend that each school district, State agency, or institution of higher education should receive support through title V. That would be impossible. Attempting to spread limited Federal moneys among all who have even tangential responsibility for the preparation of teachers will result in such a dilution of funds that no one will be served adequately.

Our proposals suggest instead, a limited number of competitive awards, funding only those projects judged to be the most outstanding and demonstrating the strongest commitment to quality teacher education and professional development.

Addressing the need for partnerships, let me say that educational excellence is the joint responsibility of higher education, local school districts, States, and the Federal Government. For this reason, we are proposing a series of activities in which colleges and universities, school districts, State agencies, and others would be encouraged to work in partnership on programs to assist career teachers, provide induction experiences for beginning teachers, sponsor summer training institutes, or conduct research and studies on critical issues as identified by school districts, institutions, and State agencies.

Unlike the institutional development awards described earlier, these partnership programs would focus on the professional needs of entry-level or career teachers. Without greater depth or more time in collegiate preparation programs we cannot graduate persons who are able to assume full professional responsibility for their clients. We have never claimed that those entering the teaching profession after a 4-year program are mature professionals. That is something that comes after much experience and additional academic preparation. How much these teachers will grow professionally and how confident they will become are functions of on-the-job training, professional nurture, and the availability and quality of in-service programs. We believe teachers, teacher educators, and school district personnel should be actively involved in developing induction programs for these new teachers as well as designing schoolwide professional experiences for career teachers.

Finally, the immediacy of the need. Collecting data on the anticipated demand for and supply of qualified teachers is a complex undertaking, and few analysts agree on either the appropriate methodology for such a task or on projections from current data. However, most agree that given the average age of today's classroom professionals, the growth in the size of the school-age population and a decrease in the number of individuals entering the teaching profession, we will face a teacher shortage within a short period of time. Indeed, it is not impending in many States, it is present. For that reason, the Federal Government should support programs that can be implemented quickly and decisively. If this caution is not heeded, States such as my own—Florida—will be forced to hire unqualified persons to serve as teachers. And if we are now a nation at risk, that risk can only become even greater.

Some argue that there is need for additional data gathering and analysis before funding new Federal programs. We agree with the importance of collecting current and reliable information on our educational system, and we strongly support strengthening the capability of the National Center for Educational Statistics to do so. However, this data gathering must be balanced against the consequences of postponing needed action. We must act, and we must act now. Our citizens are demanding well-educated, well-prepared teachers and we have the professional expertise to continue to build a teacher training system that will produce such persons. If the Higher Education Act is enacted in 1986 and funding is available in 1987, our institutions will be able to have the programs I have outlined in place by 1988. If the initiation of these professionally sound programs is delayed 1 or 2 years awaiting the outcome of another data collection activity, citizens and their children are the ones who will suffer the consequences.

We support strengthening the government's present data gathering arm, the National Center for Educational Statistics, to provide information policymakers and educators need to make informed decisions. This should be done at the same time the programs authorized through title V of the Higher Education Act are being implemented.

In conclusion, I urge your continued support for schools, colleges, and departments of education and urge that that support be adequate to meet the needs so evident in our schools. I appreciate the opportunity to present our recommendations to you, and on behalf of the American Association of Colleges for Teacher Education and the American Council on Education I want to thank the members of this subcommittee for their continued support for quality teacher education programs.

Mr. Ford. Thank you.

[The prepared statement of Dr. Norene Daly follows:]

Prepared Statement of Dr. Norene Daly on Behalf of the American Association of Colleges for Teacher Education, the American Council on Education, the Association of Colleges and Schools of Education in State Universities and Land Grant Colleges and Affiliated Private Universities, the Association of Independent Liberal Arts Colleges for Teacher Education and the Teacher Education Council of State Colleges and Universities

Good morning Mr. Chairman, members of the subcommittee. I am pleased to be with you to discuss options for the reauthorization of Title V of the Higher Education Act. I am president-elect of the American Association of Colleges for Teacher Education, however my testimony today is also on behalf of the American Council on Education and reflects the views of a number of higher education organizations participating in a two year effort to develop reauthorization recommendations for this Title.

Last February the National Commission for Excellence in Teacher Education issued their report, "A Call for for Change in Teacher Education." In that report the Commission stated ". . . every part of a teacher's education—from the liberal arts programs of the prospective teacher to the continuing education of the veteran—can be improved; even the best existing programs are not good enough. Yet, we recognize that many efforts to improve are underway, and we urge that these be supported and reinforced."

There are many challenges facing teacher preparation institutions: current research findings must be integrated into education programs; undergraduate and graduate curricula must be modified to meet new technologies and practitioner needs; the entire college or university—not just the education department—must assume responsibility for the preparation of new teachers and, we must work more closely with practitioners and administrators to provide high quality professional development. We believe that a new Title V of the Higher Education Act focusing on preservice teacher education and professional development activities with an emphasis on school, college and university partnerships can help us meet these challenges. The higher education community has developed a position statement that reflects our consensus on these issues and a copy is included, for the record, as an appendix to my testimony.

Four themes constitute the framework for our recommendations on reauthorization of Title V:

Strengthening teacher preparation programs is most efficiently accomplished by encouraging and promoting change at the college or university where students receive their undergraduate or graduate education.

Anticipating limited federal support for new initiatives, resources should be targeted to those activities where the greatest leverage may be exerted.

Programs to assist entry-level and career teachers should be developed and administered cooperatively between institutions of higher education and local school personnel.

New federal programs should be implemented quickly and decisively.

In my statement today I will briefly speak to each of these four themes.

STRENGTHENING TEACHER PREPARATION PROGRAMS

The education of prospective teachers must continue to be centered in colleges and universities which provide structure for the systematic study of knowledge as well as scholarly inquiry and intellectual discourse. Title V was designed with this in mind and it serves as the rationale for teacher education's inclusion in this title of the Higher Education Act. Albeit, higher education must be committed to the continued revitalization of programs to prepare teachers. Research in the 1960s and 1970s has expanded the knowledge base undergirding teaching and learning; as a result, teacher education today can be considerably different from teacher education of a decade ago. Recognition of the validity of this knowledge base, coupled with modest federal support, will allow us to begin to design and institutionalize new and improved training programs.

This Subcommittee and the House Committee on Elementary, Secondary, and Vocational Education have given strong bipartisan support for adequate funding for elementary, secondary, and postsecondary education and you know better than most the extent to which all of us have suffered losses in federal program support. However, with the inclusion of the previous Title V programs into the Chapter 2 block grant, and with accompanying cuts in other personnel preparation programs, during the last four years federal support for teacher training has declined more than 25%. Compounding this is a situation documented by Peseau and Orr in 1980, and highlighted in the report of the National Commission for Excellence in Teacher Education: professional schools and departments of education are traditionally funded at significantly lower levels than other higher education programs. Therefore, while schools, colleges, and departments of education are faced with a diminished resource base they are expected to be responsive to calls for promoting excellence; to retain a commitment to equity; to compete with other professional programs for our share of talented students; and to respond with new programs to meet the changing technological needs of practitioners.

Modest grants to institutions of higher education to stimulate program change will generate long-term benefits. This strategy has been effectively used by the Fund for the Improvement of Postsecondary Education, as well as through the Education of the Handicapped and Bilingual Education Acts. New programs, supported by similar grants, might promote cooperative efforts between faculties of liberal arts and faculties of education to revise and strengthen general studies and professional programs; they could be used to design alternative professional preparation programs for non-traditional teacher education students—such as the program outlined by Representative Chandler; or, to provide support for consortia of institutions within a region to coordinate teacher training activities.

LIMITED RESOURCES

While the preparation of qualified teachers is critical to the maintenance of a strong educational system, we appreciate that fiscal constraints facing the Congress may not allow optimum funding for teacher education preparation at the present time. For that reason, our recommendations differ from some of the suggestions of our professional colleagues. We propose federal support for a series of carefully defined activities with specified outcomes that will allow institutional flexibility while providing accountability to the Congress. We propose the Congress set a modest authorization level of $75 million to be distributed among four programs:

	Millions
Institutional support for teacher education	$30
Summer institutes	$18.75
School, college, and university partnerships	$22.5
Data gathering	$3.75

We do not expect or recommended that each school district, state agency or institution of higher education should receive support through Title V. Attempting to spread limited federal monies among all who have even tangential responsibility for the preparation of teachers will result in such dilution of funds that no one will be served adequately.

Our proposals suggest instead, a limited number of competitive awards, funding only those projects judged to be the most outstanding and demonstrating the strongest commitment to quality teacher preparation and professional development.

PARTNERSHIP

Educational excellence is the joint responsibility of higher education, local school districts, states and the federal government. For this reason, we are proposing a series of activities in which colleges and universities, school districts, state agencies and others would be encouraged to work in partnership on programs to assist career teachers, provide induction experiences for beginning teachers, sponsor summer training institutes, or conduct research and studies on critical issues as identified by school districts, institutions and state agencies.

Unlike the institutional development awards described earlier, these partnership programs would focus on the professional needs of entry level or career teachers. Without greater depth or more time in collegiate preparation programs we cannot graduate persons who are able to assume full professional responsibility for their clients. How much these teachers grow professionally and how competent they become are functions of on-the-job training, professional nurture, and the availability and quality of inservice programs. We believe teachers, teacher educators and school district personnel should be actively involved in developing induction programs for these new teachers as well as in designing school-wide professional experiences for career teachers.

IMMEDIACY OF THE NEED

Collecting date on the anticipated demand for, and supply of, qualified teachers is a complex undertaking and few analysts agree on either the appropriate methodology for such a task or on projections from current data. However, most agree that given the average age of today's classroom professionals, the growth in the size of the schoolage population and a decrease in the number of individuals entering teaching, we will face a teacher shortage within a short period of time. For that reason, the federal government should support programs that can be implemented quickly and decisively. If this caution is not heeded, states such as my own, Florida, will be forced to hire unqualified persons to serve as teachers.

Some argue that there is need for additional data gathering and analysis before funding new federal programs. We agree with the importance of collecting current and reliable information on our educational system, and strongly support strengthening the capability of the National Center for Educational Statistics to do so. However, this data gathering must be balanced against the consequences of postponing needed action. Our citizens are demanding well educated and prepared teachers and we have the professional expertise to build a teacher training system that will produce such persons. If the Higher Education Act is enacted in 1986 and funded for 1987, our institutions will be able to have the programs I have outlined in place, training new teachers and assisting current teachers, by 1988. If the initiation of these professionally sound programs is delayed one or two years, awaiting the results of another data collection activity, citizens and their children are the ones who will suffer the consequences.

We support strengthening the government's present data gathering arm, the National Center for Educational Statistics, to provide information policymakers and educators need to make informed decisions. This should be done at the same time the programs authorized through Title V of the Higher Education Act are being implemented.

I appreciate the opportunity to present our recommendations to you and, on behalf of the American Association of Colleges for Teacher Education and the American Council on Education, I want to thank the members of this subcommittee for their continued support for quality education programs.

APPENDIX

HIGHER EDUCATION ACT—TITLE V

Preservice and continuing teacher education is a cooperative effort that must recognize the needs of students, parents, teachers and principals, as well as and the capabilities of colleges and universities, school districts, and government to meet those needs. The higher education community believes that a new Title V of the Higher Education Act should focus both on preservice education and professional development activities with an emphasis on school, college and university partnerships for program design and implementation. Discussion of strategies for educational reform within this framework follows.

PROFESSIONAL DEVELOPMENT AND SCHOOL, COLLEGE AND UNIVERSITY PARTNERSHIP ACT

Part A—Data Collection and Research

(1) The Secretary shall utilize the legislative authority under the General Education Provisions Act, Part A, Sec. 406(b) to annually assess current and future supply and demand for teachers with particular attention to: long-term and short-term shortages of personnel in various areas of specialization, shortages in particular states or regions, and the number of minorities and women entering teaching. This analysis may include assessment of other educational needs identified by the Congress such as, for example, the need for instructional equipment and materials in elementary and secondary schools and in postsecondary institutions. These data should then be used to direct federal resources for program improvement activities described in Part B of this Title. In undertaking the data collection, the Secretary shall take action to reduce reporting burden through voluntary responses and sampling techniques. The Secretary may reimburse respondents for any extraordinary costs incurred in the provision of information to assist the Secretary in complying with the data collection under this Part.

(2) The Secretary of Education is authorized to award grants to institutions of higher education for research consistent with programs authorized in this Title.

(3) At least 5% of the funds allocated for this Title shall be reserved for activities described in this Part.

Part B—Institutional Support for Teacher Education Programs

The Secretary of Education is authorized to make grants to institutions of higher education to encourage high standards of quality, a commitment to professional teacher education, and rigorous admission for entry standards into teacher preparation programs.

Examples of such programs include, for example:

Designing and implementing programs with rigorous admission standards, and in attracting talented students into these programs;

Designing teacher education programs involving consortia of institutions to help members of the consortium diversify and redirect teacher education programs and curricula;

Supporting cooperative efforts involving faculties of liberal arts and faculties of education to revise and strengthen general studies and professional education programs including, for example: strategies to incorporate clinical experiences throughout the preparation program, and extension of teacher preparation programs beyond the traditional four-year period;

Integrating current research, including practitioner identified research, more fully into teacher education programs and sharing such research with elementary and secondary education teachers and administrators;

Developing alternative professional preparation programs for non-traditional teacher education students;

Preparing teachers for shortage areas identified in Part A;

Designing and implementing staff development projects for faculty members of collegiate departments of education to acquaint faculty with new research on teaching and learning, testing, and innovative teaching practices;

Designing and implementing teacher education programs geared to meet the needs of historically under representated populations and institutions with large numbers of such populations as identified from data collected in Part A;

Developing programs to train existing or new school personnel in new technologies.

Part C—Summer Institutes

The Federal government shall inaugurate a program of summer institutes for educators at the elementary, secondary, and postsecondary levels to include advanced instruction in subject matter and teaching techniques, including research on student learning, effective teaching, and school-site improvement. The summer institutes are intended to provide staff development opportunities for education professionals as well as to provide an opportunity for non-educators who are seeking entry into the profession to earn the credits necessary for a position as an elementary or a secondary school teacher. The institutes, which will include both subject matter and teaching skills components, are intended to complement not replace an undergraduate or graduate program of studies, must meet or exceed the academic standards of the institution or institutions at which they are conducted, and should expand state and local efforts rather than duplicate or replace existing programs. Institute grants shall be awarded to institutions of higher education, consortia of colleges and universities, or consortia that include institutions of higher education and appropriate state agencies and/or local professional development units.

Part D—School, College and University Partnerships

Federal funds, through a system of discretionary grants from the Secretary of Education, shall be awarded to serve as a catalyst to encourage and facilitate school, college and university partnerships to focus on a number of critically important areas.

These grants shall be used to support jointly developed and executed projects involving schools, local school districts and institutions of higher education that demonstrate partnership in addressing teacher preservice and staff development needs. it is the intent of this part that these partnerships not be limited to institutions of higher education, schools, and school districts, but may also include teachers, administrators and appropriate state agencies. Partnership awards under this Part are established under three broad categories of activities: IHE focused grants; LEA focused grants; and other partnership awards.

(1) IHE focused grants. Awards under this section shall be awarded to institutions of higher education for programs developed and administered in partnership with local education agencies and other eligible groups as described above. Projects supported under this Part might include, for example, joint arrangements between elementary or secondary schools and institutions of higher education to provide programs of assistance for beginning teachers; joint arrangements between elementary or secondary schools and IHEs to provide expanded clinical experiences for teacher education candidates at the school site while using teachers from those schools to work with education students at the college or university; design and conduct of staff development units to allow teams of teachers and/or administrators an opportunity to work together on school-site projects; and, projects involving college/university and elementary/secondary school faculty in the practical application of educational research and evaluation findings.

(2) LEA focused grants. Awards under this section would be to local education agencies for programs developed and administered in partnership with institutions of higher education and other eligible groups as described above. Grants could be used to create professional development centers for teachers which would encourage exploration and sharing of new research, ideas and materials to be applied in the classroom. Such centers would bring together a variety of resources including teachers from various school sites and/or school districts serving as resources for their colleagues, collaborative activities between K-12 teachers and faculty at institutions of higher education, and a variety of institutional and community resources which could be applied to improving instruction.

(3) Other Partnership Grants. Awards under this section would be to institutions of higher education, schools, or local educational agencies in partnership with other appropriate education agencies or units to conduct education policy studies; use timely research and development data to design and implement curriculum improvements; conduct collaborative research involving university faculty and classroom teachers and school site administrators; and upgrade instructional systems and technology in schools and local school districts.

Priority for institutional awards in this Part will be to those colleges or universities that demonstrate a commitment to professional teacher education, to the profession of teaching, and to strengthening admission and graduation requirements for teacher education students.

Priority for SEA or LEA awards in this Part will be to states or local education agencies that demonstrate a commitment to establishing and maintaining professional working environment for elementary and secondary school teachers.

Mr. FORD. Dr. Hawley.

STATEMENT OF WILLIS HAWLEY, PH.D., DEAN, PEABODY SCHOOL OF EDUCATION, VANDERBILT UNIVERSITY, REPRESENTING THE AMERICAN ASSOCIATION OF SCHOOL ADMINISTRATORS

Mr. HAWLEY. Mr. Chairman, thank you for the opportunity to testify before the subcommittee.

I want to focus today on a specific recommendation of the American Association of School Administrators and in the process deal with a broad range of issues related to the teacher shortage problem. The AASA is proposing that the Congress establish, in collaboration with the President and the Secretary of Education, a national commission to examine issues related to the supply and demand for teachers. It is not an effort to delay action. It is an effort to set in place the basis for addressing this problem in a comprehensive way because I think as you noted earlier many of the proposals that are being made represent a band-aid approach to this problem; an incremental solution, if you will, and the issues we have to address go well beyond proximate problems. Unless the causes of the shortage of qualified teachers are addressed in ways that fundamentally change the current benefits and costs of being a teacher, all other educational reforms we can imagine will have little lasting impact.

Everybody recognizes that we have or we are about to confront a major teacher shortage. As has been noted, we have such a shortage in many parts of our Nation at the moment. But our national commitment to decentralized policymaking, a commitment which I and AASA share, means that it will be difficult for the Nation to respond to the crisis in a coherent way. Indeed, looking out at the policy proposals that are on the agenda now, one can see contradictory proposals. Ones that go out almost part time, if you will. So it is important that Federal leadership be taken to clarify the issues and to bring information to bear on the problem. This is not only appropriate, but necessary.

I want to discuss four types of issues with which such a commission might deal. They represent four issues that this committee must wrestle with as it does its business in general, so I hope that my comments will address not only the commission idea but the work of this committee.

First, the Nation needs to better understand the character of the teacher shortage and to have an ongoing capacity to do just that. It seems important that we recognize that we have had recurrent shortages of teachers from the time we have begun to measure these issues. Despite the fact that there are many intelligent teachers in the teaching corps, if one focuses on academic ability of those preparing to teach, we have had a shortage of candidates who are of average or better ability for decades. And this has almost been true; that is to say, between the immediate decades in the areas of math and science.

Let me acknowledge that the National Center for Educational Statistics has just recently taken some new initiatives in this regard, to go from a rather mundane approach to this problem to a much more imaginative one; and that needs to be encouraged, but more is needed. A national commission could address the labor market statistics' problem and recommend ways or data useful to the States and localities could be developed on a continuing basis. And I want to emphasize that the teacher shortage problem is, as I am sure you know, a local problem in the sense that the characteristics of that problem and its depth and so forth vary not only from State to State, but from labor market to labor market.

A second issue a national commission should address is to define the criteria by which we will know whether or not we have dealt with the teacher shortage. Most of the concern that has been expressed up till now has dealt with numbers. And while there is a passing attention to the issue of quality, we don't know what that means. What are the qualities we are looking for, and what does it cost to get them, not only in money but in the conditions of work, et cetera? So we want to deal with, then, criteria such as the numbers in specified fields, the quality of those people in academic terms, the effectiveness of those teachers measured by their classroom performance. And I note that academic ability is not the only, may not even be the most important criteria of teacher effectiveness. And fourth, economic cost. And fifth, the retention and reentry of effective teachers. And I want to emphasize that issue as I go on.

The third issue a national commission should address is what policy alternatives are most likely to ensure a supply of quality teachers in the long haul. In my written testimony I examine briefly how 22 different strategies might stack up against those and other criteria such as the ones I have just mentioned. The conclusions I draw from that analysis, which assumes that the amount of money available for educational reform will be limited to the levels of the most ambitious States, a proposal I suppose that is itself ambitious, that analysis suggests that many of the most common approaches now being tried are inadequate, perhaps even wasteful. A national commission to study the teaching shortage could look closely at the following six propositions which I derived from that analysis.

First, teacher shortage policies need to address and need to reduce the attrition of effective teachers and encourage reentry. Those policies are probably more cost effective than strategies to increase the size and quality of the teaching pool—of the new teachers, rather. This is because: First, new teachers usually are less effective than those with higher education to 5 years of experience, and; second, more importantly, because many of the policies that facilitate teacher retention and reentry also enhance teacher effectiveness, something some of my colleagues on this panel have already mentioned.

Second, regulatory policies such as tests, a prior admission requirements and other screens will not reduce the teacher shortage; indeed, they will exacerbate it. But more important, they will not bring better qualified people into teaching because they do nothing to alter significantly the rewards of teaching.

Third, policies that restructure the workplace by granting teachers more collective responsibility, maximizing time teachers have to teach, fostering collegiality, and providing increased information about student performance have relatively low cost, will attract new teachers and keep experienced ones and promise improved teacher effectiveness.

Let me note, however, that if such policies are to be effective, we will have to invest, as a nation, in the retraining of school administrators. As an aside, let me note that if we think that we have weaknesses in the training of teachers, I suggest that what we do in that area looks wonderful compared to what we do in the training of school administrators.

AASA, of course, supports an investment; Congress has authorized such legislation but not funded it, and I encourage you to look at that proposal and others related to the training of school administrators once more.

Fourth, funds available for teacher salary increases as spread proportionately across all teachers seem inadequate to alter substantially the supply of good teachers. Two ways to address this reality may be to focus increases on more experienced teachers and, two, to provide for well-implemented career ladder plans that allow a substantial minority of teachers to obtain the highest ranks. That proposal, however simple it sounds, is contrary to the trends that we witness now.

Fifth, policies that focus resources on the preentry period of a teaching career such as loans and scholarships, extended preparation programs, are unlikely to address the shortage problem unless they are handsomely subsidized. Such subsidies, on the other hand, will undermine resources for other reforms. Extended programs for teacher preparation, for example, could double the cost of becoming a teacher to the individual and, even if reasonably subsidized, could require at least a third of the money available to bring about all educational reforms. Moreover, these policies suffer from the limits of regulatory policies in that they do nothing to enhance the quality of teachers' lives once they teach, and in doing that lies the ultimate solution to this problem.

Sixth, policies that make it easy and rewarding for able former teachers to reenter teaching seem to be an important part of a long-term solution to the problem of maintaining a well-qualified teaching corps. The so-called reserve pool of former teachers is much, much larger than the number of college students now preparing to teach. In fact, it is much, much larger than the number of teachers. In California, for example, there are more than—there are almost 1 million teachers certified to teach who are not now teaching. Almost no attention is being given to this issue; indeed, some things that are being done at the State level will make reentry more difficult.

The fourth general issue, and my final point, that the national commission should address is the need to restructure the teaching profession, and I suggest that nothing less than that will address the problem. We cannot attract the quality and quantity of teachers the country needs and achieve quality education for all children by incremental strategies. Most of the States are trying to do small pieces of the puzzle. National attention, through a commission such as the one advocated by AASA, could focus attention on the need to restructure the profession before the energy for reform is expended on unpromising and largely band-aid policies.

Some major changes in the profession seem likely to result in increasing both the attractiveness and effectiveness of teaching, shouldn't be studied by a commission and should inform the policymaking of this committee I suggest are these:

First, the process of reentry to the profession needs to be changed to make it relatively inexpensive to begin to teach and relatively hard to stay in the teaching profession. At the same time, novice teachers need to be supported, and often they are not, so they experience the intrinsic rewards of teaching. A promising strategy for doing this is to follow a policy such as that advocated earlier here, that of a teaching academy, much like teaching hospitals where modestly paid interns have the opportunity to learn after having preprofessional college-based education, working closely with experienced teachers and university people in the context of a school designed for that purpose. It would also be a wonderful place to send one's children I suggest. Modest changes in the professional development resource center provisions of title V would allow the establishment of such activities.

Second, a career in teaching should include opportunities for further formal education supported, perhaps, by forgiveable loans granted after, not before, one has demonstrated one's commitment and competence to teach and at the time when one has the background to use advanced professional training. Chronic shortage fields like math and science could be addressed by providing cashable education credits such as those provided in the GI bill for persons who teach even if they leave the profession.

Third, a teaching career needs to have steps to it that one can climb instead of the very flat character of the structure and salary schedules teachers now experience, and a good number of teachers have to have the opportunity to achieve the highest level of that ladder.

Fourth, and finally, the intrinsic rewards of teaching, which in theory exceed those available for most other professions, need to be enhanced. This means that teachers should receive more meaningful feedback about their effectiveness. They should receive more supportive supervision, peer interaction, opportunities for participation in school-level policymaking and for taking initiatives, and support from parents and community leaders.

So. in summary, this is an opportune critical time to direct the Nation's attention in a positive and forward-looking way to how teaching can be made a more rewarding profession. Schools can only be as good as the teachers in them. I hope that these thoughts will be helpful to the subcommittee as it considers its important task.

Thank you.

Mr. FORD. Thank you.

[The prepared statement of Willis D. Hawley follows:]

PREPARED STATEMENT OF WILLIS D. HAWLEY, PEABODY COLLEGE, VANDERBILT UNIVERSITY

Mr. Chairman and members of the committee, I appreciate the opportunity to testify before this committee. I am Willis Hawley, Dean of Peabody College, Vanderbilt University's School of Education and Human Development. Peabody College this year celebrates its 200th anniversary and now educates more teachers than any other private selective research university.

I am here at the invitation of the American Association of School Administrators (AASA). I serve on the government relations committees of both the American Association of Colleges of Education and the American Educational Research Association. I have had the opportunity to author several publications related to school improvement and teacher education.

The American Association of School Administrators is urging that the Congress establish, in collaboration with the President and the Secretary of Education, a national commission to examine issues related to the supply and demand for teachers (see Appendix I for the AASA policy statement). The establishment of such a commission is warranted by the potential severity of the teacher shortage the nation is about to experience if significant changes in public policy are not implemented. Moreover, the issues go beyond proximate problems. Unless the causes of the shortages of qualified teachers are addressed in ways that fundamentally change the current benefits and costs of being a teacher, all the other educational reforms we can imagine will have little lasting impact and the promise of a quality education for all the nation's children will become empty rhetoric.

An enduring shortage of qualified and effective teachers literally would threaten the future of our society—in a number of ways. But our commitment to decentralized policy making related to most of the viable remedies for the teacher shortage means that it will be difficult for the nation to respond. Federal leadership in clarifying issues and bringing information to bear on the problem is not only appropriate but necessary.

In this testimony, I will discuss some of the general issues that should shape the agenda of a national commission and, in the process, share with the committee some ideas that might shape policy making in the immediate future. The key problems that must be dealt with are:

1. Defining the nature of the teacher shortage and ways to understand its complexities on a continuing basis.
2. Identifying the criteria by which we might know if the strategies we adopt to deal with the teacher shortage are successful.
3. Specifying the range of alternative policies that might be employed to address the problem and examine, or develop procedures and mechanisms for examining, the cost-effectiveness of different policies.
4. Developing new models of the teaching profession that reconcile our high ambitions with our limited willingness to allocate economic resources to public education without undermining quality educational opportunities for all children.

Let me elaborate on each of these issues.

UNDERSTANDING THE TEACHER SHORTAGE

The nation is about to experience a massive teacher shortage. In some fields of teaching and in some regions of the country, that shortage is already present. Everyone knows of the math and science teacher shortage, but this is only a part of it. In particular, many of our urban areas face severe difficulties recruiting teachers in many fields.

It seems important to recognize that we have had recurrent shortages of qualified teachers. If one focuses on the academic ability of those preparing to teach, we have had a shortage of candidates who are of average or better ability for decades, and almost always in areas of competence for which there is now unmet demand. But the crisis we are about to confront will be of historic proportions.

Both the number and the proportion of college students preparing to teach has declined precipitously at a time when disproportionate numbers of teachers are leaving the profession. At the same time, a baby boomlet is hitting the schools, driving up enrollments. This situation is particularly dramatic for teacher candidates, teachers, and young children who are nonwhite.

Among the most important reasons why the proportion of college graduates pursuing a career in teaching appear to be at an all-time low are:

1. Reductions in the relative earning power of teachers in comparison to other occupations and professions bidding for talented people.
2. The opening of career opportunities in other fields for minorities and women (though this seems to be having a greater impact on the pool of minority teachers than on women candidates).
3. Increased requirements for certification.
4. A decline in the quality of working environments teachers confront in many schools.

Increased emphasis on reducing class size in the primary grades and significant increases in high school graduation and college admission requirements are likely to exacerbate already existing problems in the primary grades and in certain fields (e.g., foreign languages and mathematics).

While it is possible to define the general characteristics of the teacher shortage, reasonably precise estimates of the supply and demand of teachers are problematic and we do not really know enough about the magnitude and character of the shortage problem to make informed policy. Part of the reason for this is that continuing and significant changes in relevant policies make the problem a moving target. Experts disagree even about the character of the short-run shortage in math and science. Moreover, we are dealing with a relatively unique labor market in which intrinsic rewards are very highly valued outcomes (which cuts in both directions, depending on the situation) and unusual work days and yearly calendars allow some parents to teach and be home with their children.

A major source of the difficulty in predicting the future is that we do not really know what qualities we want to extract form the labor force. For example, how smart does a teacher have to be to be effective? Indeed, since we do not want those to whom we entrust the future of our children to have any weakness, it is difficult to talk openly about placing limits on the qualities we want to purchase. Because state policies vary enormously, as do labor market conditions affecting student career choices, the characteristics of the teacher shortage vary enormously from state to state and among school systems in different states.

It seems important to create a greater capacity to understanding the supply of and demand for teachers on a continuing basis. Recently, the National Center for Education Statistics (NCES) has stepped up its activities aimed at understanding the market for teacher talent and this initiative should be encouraged. But a capability to collect and analyze "teacher data" at the state level needs to be developed. Most states have only the most primitive understanding of the problems they face. Because the nation has a major stake in avoiding teacher shortages and because policy variations account for much of the differences in teacher supply and demand, state statistical agencies should operate within common protocols and procedures as much as possible. Such coordination of efforts will need the assistance of NCES in order to ensure comparability. In turn, NCES will need the assistance of organizations representing teachers and school administrators, as well as state education agencies, to define the issues that should be addressed.

SOME CRITERIA FOR KNOWING WHEN THE TEACHER SHORTAGE HAS BEEN ADEQUATELY ADDRESSED

It is easy enough to identify ways to eliminate the teacher shortage. For example, we could reduce or eliminate requirements for entry to the profession, or we could increase teacher salaries significantly. While the first approach has been used extensively whenever previous shortages were a problem, new concern for the "quality" of teachers, coupled with traditional opposition from teacher organizations and higher education, suggests that lowering standards will not solve the problem this time. To be sure, there are a number of "alternative teacher preparation" schemes being implemented or planned, but this strategy seems unlikely to have much affect on the overall problem because it does nothing to affect the attractiveness of teaching. Two recent studies estimate that teacher salaries would need to be increased about 40 percent in order to make teaching competitive on strictly economic dimensions with other occupations and professions that attract reasonably bright college graduates. Such increases are not going to happen.

The proposition that neither higher salaries in themselves nor lower standards are viable ways to solve the teacher shortage suggests that an analysis of the effectiveness of alternative strategies for ameliorating the teacher shortage must be judged against a variety of criteria, including:

1. The quantity of teachers available to teach specified curricula.
2. The quality, measured by the academic capabilities, of teachers.
3. The effectiveness of teachers, measured by their classroom performance related to student learning.
4. The economic cost.
5. Consequences for the restructuring of schools (e.g., the role of teachers, the nature of instruction, etc.)
6. The retention and reentry of effective teachers.
7. Consequences for the profession and teaching as a career (e.g., the stability of the work force, highly differentiated tasks based on mode of entry, etc.)

Some of these considerations will cut in different directions as they are applied to particular policies. For example, if we significantly increase the preentry costs for prospective teachers (e.g., by requiring extended preentry college programs), these expenses will have to be subsidized or the quality of students will go down. This, in turn, means that the money available for teacher salary increases will be reduced. The only reason that quality candidates would enter the profession, even if their entry costs were subsidized, is if the career rewards were more attractive than they are now. But the money available to provide such rewards would be reduced by the new induction process itself. Thus, increasing the costs to enter the profession will require, if quality is not to fall, that the structure of the teaching profession change so that some teachers received substantially more status and economic rewards than others and that the eligibility to receive those rewards would be set at entry. All of this, in turn, would require that the way schools are organized would have to be changed significantly. If this sounds familiar, it should. This is the way the armed forces deals with its professional staffing problem. It seems worth noting that more recruits become teachers each year than join the army, navy, air force, and marines combined.

GENERAL POLICY OPTIONS FOR AMELIORATING THE TEACHER SHORTAGE

Most efforts to deal with the general teacher shortage, as well as with specific subject areas, focus on bringing novices into teaching, particularly more young people. Surely, this pool of candidates needs to be enlarged and strengthened. But we could reduce the need for novice teachers if we reduced the rate of attrition among experienced teachers (preferably among those who are most competent), and if we could recruit back to teaching talented persons who have left the active profession. Policies designed to address the teacher shortage need to keep these three pools in mind because what benefits one may not equally benefit another.

Given differences in the way teaching is funded and teachers are certified among the states, there are dozens of different policies that could affect the supply and demand for teachers. In the next section of this paper, I will examine the likely consequences of a number of those options now receiving the most attention from policy makers. To set the stage for that analysis, let me suggest that most current policy options fall into one of the following categories (for a more elaborate list, see Table II).

1. Preentry requirements (tests, requirements, extended programs, etc.).
2. Alternative certification plans that by-pass conventional teacher preparation.
3. Special loans and scholarships (preentry).
4. Increased economic benefits (special bonuses, salaries, merit pay).
5. Status benefits (career ladders, recognition, authority).
6. Improved working conditions.
7. Increased intrinsic rewards.

The last two of these have received virtually no attention from policy makers. But they are getting increasing attention from researchers, and working conditions, of course, have always been of concern to teachers and their organizations.

ANALYSIS OF POLICY OPTIONS

Let me now briefly examine the likely consequences of each of several policies that are being pushed as at least partial solutions to the teacher shortage problem. The effects are judged against the seven criteria noted earlier. Policies that would have some obvious differential effects on the three pools of recruits—teacher candidates, current teachers who might leave, and former teachers—are noted accordingly.

An analysis of each option is presented in Table I. When the conclusions reached have some basis in evidence, I designate them with an (E). Otherwise, the judgment made is intuitive (though, the reader is assured, entirely sensible).

TABLE 1.—LIKELY EFFECTS OF SELECTED TEACHER SHORTAGE POLICIES ON POSSIBLE OUTCOMES

Policy[1]	Quantity	Academic quality	Effectiveness	Added financial[2] costs (est.)	Structure of schools	Retention	Affect on profession	Comments
1. Higher admission and screening standards for teacher education.	Significant decline (E).	Average up no effect on entry of higher quality students.	Uncertain (E)	None	None	None	Moderate gains in status.	
2. Tests of teacher knowledge of subjects taught.	Significant decline (E).	Average up no effect on entry of higher quality students.	Small (E) positive in advanced courses.	Very small	None	None	Moderate gains	
3. Extended preentry teacher preparation (5th year programs).	Significant decline (E).	Average up no effect on entry of higher quality students.	Uncertain	$600,000,000 if no stipend provided. $16,000-17,000 each teacher candidate 50 percent subsidy equals $1,400,000,000.	None	Small increase	Moderate gains in status.	Taxpayer cost is subsidized portion of public college education, cost to individuals is earnings foregone plus tuition and misc. fees and books.
4. Internship programs	Moderate decline	Average up (E) no effect on entry of higher quality students.	Significant increase	$330,000,000; $1,650,000,000 if subsidized.	Some schools might become "teaching academies".	Moderate to good increase.	Changed role for some master teachers.	
5. Alternative (by-pass) certification programs.	Moderate increase	Uncertain	Some decrease (E)	None	None	Decrease	Uncertain	
6. Loan forgiveness scholarships (preentry).	Small increase (E)	None (E)	None	$2,000-$6,000 per student.	None	Small increase	None	Could induce unwilling or unable teachers to stay in the profession.
7. Industry loan of personnel.	Very small increase	Increase	Increase for advanced students/decrease for others.	None	None	Decrease	None	
8. Increased beginning salaries.	Small to moderate increase depending on amount.	Small to moderate increase depending on amount.	Small	$4,620,000,000 (10 percent increase).	None	Small to moderate increase depending on amount.	Small increase in status.	Beginning salaries increase will apply to all teachers.

TABLE 1.—LIKELY EFFECTS OF SELECTED TEACHER SHORTAGE POLICIES ON POSSIBLE OUTCOMES—Continued

Policy[1]	Quantity	Academic quality	Effectiveness	Added financial[2] costs (est.)	Structure of schools	Retention	Affect on profession	Comments
9. Increased salaries focused on more experienced teachers	Small to moderate increase depending on amount.	Small to moderate increase depending on amount.	Small to moderate	10 percent increase equals $4,620,000 with 700,000,000 more to experienced teachers.	None	Moderate increase	Small increase in status.	Assumes beginning salaries less important to choice than career income, could be targeted.
10. Incentive pay for special fields.	Small to moderate increase depending on amount.	Small to moderate increase depending on amount.	Small	$2,000–$4,000 per teacher in field.	None	Good increase for target.	Differential pay scale by field, some internal conflict.	This "market sensitive" approach is common in most professions.
11. Merit pay	Small to moderate increase depending on amount.	Small increase	Moderate if tied to staff development, if not, very small or none.	If 30 percent received 10 percent awards equals $1,575,000,000.	Different roles might be provided to "best" teachers.	Positive for those rewarded, negative for those not rewarded; overall, depends on number rewarded.	Small increase in status.	Positive effects depend heavily on implementation.
12. Career ladders	Small to good depending on amount of financial reward; possible negative impact on reentry.	Small to good depending on amount of financial reward; could discourage talented reentrants.	Moderate if tied to staff development, if not, very small.	If 30 percent got 30 percent increase and another 30 percent received 15 percent equals $6,800,000,000.	Uncertain but potentially significant changes.	Positive for those rewarded, negative for those not rewarded. Overall, depends on number rewarded.	Significant changes in "peer" relations and in roles.	Depends on implementation; individual recognition adds to effect of financial reward.
13. Honorary awards; recognition.	None	None	None	None	None	Very small	Very small increase in status.	
14. Greater teacher control over key decisions in school.	Small increase (E)	Small increase	Good increase (E)	None	Significant	Good increase (E)	More status, higher morale.	Becoming increasingly difficult as rulemaking is centralized.
15. Professional autonomy	Small increase (E)	Small increase (E)	Uncertain, likely decrease.	None	Small	Small increase (E)	More status, higher morale.	Becoming increasingly difficult as rulemaking is centralized.

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16. Orderly school environment	Small increase (E)	Small increase (E)	Good (E) increase in affected schools.	Small staff, staff development and support costs—amount depends on school.	Small	Moderate (E) to large depending on on school.	Orient more toward teacher expertise, higher status	Most schools are not disorderly but those that are, are terrible places to work and color public images.
17. Facilitate colleague interaction.	Small increase	Small increase (E)	Moderate (E) increase.	Small	Changed role for administrators, different instructional strategies.	Moderate increase (E)	Higher morale	
18. Reduce non-instructional activities.	Very small increase	Very small increase	Moderate increase (E)	$15,000 for every 20 teachers equals $1,525,000,000.	Additional staff	Moderate increase (E)	Higher status and morale.	Cost for support staff
19. Better feedback on student performance.	None for novices, increase for reentrants (E)	None for novices, increase for reentrants (E).	Good increase if tied to staff development (E).	Cost of computer-managed testing program, some staff development.	Potential for more informed decisionmaking.	Good (E) increase	Higher status	
20. Opportunities for professional development	None for novices, some for reentrants.	Small increase (E)	Small increase	$250 for all teachers equals $525,000,000.	None	Small increase	Small increase in status.	Would have to be available to all teachers.
21. Facilitate the movement of experienced teachers among States.	Moderate increase	Small increase	Moderate increase	None or very small	None	Moderate increase	Higher morale	Would involve certification requirements, pension rights, and the transferability of experience.
22. Facilitate the reentry of former teachers.	Moderate to good	Small increase	Good increase if reentry is.	Perhaps $5,000 per teacher compared to beginning teachers.	None	Good increase	More experienced teaching corps.	Salary credits for experience, reactivate pension, lateral entry to career, career ladder, et cetera.

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[1] For definitions of these policies, see table II.

[2] Dollar figures are rough estimates of annual costs nationally (using 1984 data) unless otherwise noted. Salary figures do not include benefits.

TABLE II.—BRIEF DESCRIPTIONS OF VARIOUS TEACHER SHORTAGE POLICIES

1. Higher Standards for Admission to and Graduation from Teacher Preparation Programs. Such policies typically raise grade-point average minimums, set lower limits on aptitude test (ACT, SAT) scores, and require more or specific courses (e.g., a major in a discipline other than education).

2. Preentry Tests of Teacher Knowledge. Such tests reflect a lack of confidence in the screening done by universities, and range from basic skills tests to tests of subject-matter expertise to test of so-called "professional knowledge" of teaching.

3. "Extended" Programs of Teacher Preparation. These programs require, in various formats, five or more years of college-based education before one is allowed to teach. Internship programs are not considered fifth-year programs for purposes here and are increasingly advocated as an add-on to five-year programs by advocates of extended programs.

4. Internship Programs. This involves a full year, usually with partial pay, of supervised training in a special school. Practice teaching is consolidated with the first year of induction to the career. Such programs would be administered jointly by college and professional educators.

5. Alternative Certification Programs. This policy bypasses teacher education programs and seeks to minimize preentry requirements for teachers. It sees persons who enter teaching in this way as learning on the job in their own classrooms with certain supports.

6. Preentry Loan Forgiveness "Scholarships". Grants and no-interest loans, often limited to a certain field, that need not be repaid if recipients teach a specified time.

7. Industry Loan Programs. Companies loan personnel full or part time to teach certain topics, e.g., mathematics and science. A variation on this is the facilitation of early retirement to enter teaching.

8. Increased Beginning Salaries. Significant increases in entry salaries are provided, usually with corresponding increases for all teachers.

9. Increased Salaries Focused on Experienced Teachers. This approach, which is not explicitly on the policy agenda, would keep beginning salaries relatively low and would use salary increase resources for persons who have taught three to five years and proven their competence.

10. Incentive Pay for Special Roles. Under this policy, bonuses and differentiated pay scales are targeted on roles for which it is difficult to find qualified applicants (e.g., mathematics teachers).

11. Merit Pay. Merit pay rewards teachers through salary increases that are tied to performance evaluation of various kinds. These often take the form of bonuses that must be reearned each year.

12. Career Ladder Plans. As with merit pay, performance evaluations are used as a basis for salaries but career ladders add the idea of stages of eligibility for different award levels and differentiated roles. Some career ladder plans embody staff development components.

13. Honors and Recognition. This no-cost policy seeks to give peer and public recognition to superior performance.

14. Control over Key Decisions. This policy involves teachers in collective decision making at the school and/or departmental level in making decisions regarding curriculum, grading policies, disciplinary practices, and other important choices that affect what happens in schools and classrooms.

15. Professional Autonomy. Allows teachers considerable freedom as individuals to make choices about how they organize their classrooms, the emphases they give to subjects, the teaching methods they use, etc.

16. Orderly Teaching Environments. Not usually seen as a recruitment device, this policy seeks to assure teachers that they can do their job with minimal disruption. It usually requires significant teacher involvement and strong support from school and district administrators.

17. Facilitate Collegial Interaction. To encourage teachers to interact professionally with peers, instruction is organized to promote teaming, teachers are provided with common planning time, peer observation is facilitated, and administrators involve teachers in significant decisions.

18. Reduce Noninstructional Activities. Teachers are provided with staff, volunteers, and technological support to carry out tasks like monitoring halls, buses and lunch rooms, collecting money, locating instructional resources, etc. In addition, disruptions of teaching for other school activities are minimized.

19. Provide Feedback on Student Performance. Most teachers want to teach for altruistic reasons. This policy seeks to provide information about how children are

being helped and how they can be helped more. Such feedback contemplates no negative sanctions for teachers if students are not performing well.

20. Opportunity for Professional Development. Such incentives include opportunities to participate in workshops, conduct research, observe exemplary colleagues, make public presentations, and undertake leadership roles.

21. Policies that Facilitate Interstate Career Moves. These would include the transferability of tenure, pensions, and experience but would not involve entitlements. Hiring decisions would be made competitively.

22. Policies that Facilitate Reentry. These generally would facilitate lateral entry by allowing teachers to retain the benefits and status they had when they left teaching, assuming they did so voluntarily. Reentry, however, should require the same high standards demanded of new teachers.

CONCLUSIONS

The estimates just presented of the consequences of different teacher shortage policies are admittedly speculative. The absence of evidence upon which more assessments could be made is one lesson to be taken from the matrix. Nonetheless, several generalizations seem to follow from the analysis. In drawing these conclusions, I make two key assumptions:

1. The financial resources needed to recruit and retain teachers will be limited and should be used in ways that both end the shortage and promote teacher effectiveness.

2. Teacher shortage policies that do not focus on the need to reduce the attrition of effective teachers and encourage reentry are more expensive in the long run and will reduce overall effectiveness of the teacher corps. This is because (a) new teachers usually are less effective than those with three to five years experience, and (b) many of the policies that facilitate teacher retention also enhance teacher effectiveness.

Lessons for teacher shortage policy that I draw from the analysis above and from the stipulated assumptions are:

Regulatory policies such as tests, a priori admission requirements, and other screens will not reduce the teacher shortage nor bring better qualified people into teaching because they do not alter significantly the rewards for teaching.

Policies that restructure the workplace by granting teachers more collective responsibility, maximizing the time teachers teach, fostering collegiality, and providing increased information about student performance have relatively low costs, will have a positive effect on all three pools of teacher recruits, and promise improved teacher effectiveness.

Funds available for teacher salary increases, if spread proportionately across all teachers, will be inadequate to alter substantially the supply of teachers. Two ways to address this reality are (a) to focus increases on more experienced teachers, and (b) to provide for a well-implemented career ladder plan that allows a substantial minority of teachers obtain the highest rank.

Policies that focus resources on the preentry period of the teaching career—such as loans and scholarships, and extended preparation programs—are unlikely to address the shortage problem unless they are handsomely subsidized. Extended programs of teacher preparation, for example, could double the costs of becoming a teacher to the individual and, even if reasonably subsidized, could require at least a third of the money available to bring about all educational reforms.

Policies that make it easy and rewarding for able former teachers to reenter teaching seem to be an important part of the long-term solution to the problem of maintaining a well-qualified teaching corps. The so-called "reserve pool" of former teachers is much, much longer than the number of college students now preparing to be teachers.

It seems clear enough that we will need a constellation of policies to address the teacher shortage problem. Moreover, because economic conditions and state and local policies affecting the so-called teacher pipeline vary among geographic areas, policies that are standardized across different labor markets will inevitably be relatively inefficient and ineffective. Despite the need for policies that are responsive to different circumstances, it would be useful if some vision or visions of a dominant career pattern for teachers were to emerge from current deliberations about how to increase the number of effective teachers serving the nation's school children.

Let me suggest one such pattern that seems to address the shortage issue in ways that strengthen the profession generally. In this scenario, talented persons would be encouraged to enter teaching after performing well in college and, either as an undergraduate or as a first-year graduate student, would take a limited amount of so-called "pre-professional" coursework. Under some circumstances, the basic pre-professional courses could be taken in intensive summer programs.

The first step in one's career would be a supervised internship in a school that served, as some hospitals do for the medical profession, as a specially staffed training site. Students would be paid on a half-time basis in exchange for instructional services that involved increasing independence. Subject matter methods courses and classroom management courses would be co-taught in these special schools by professors and master teachers, selected for their ability to educate prospective teachers, their knowledge of research, and their own teaching expertise.

To enter the internship, opportunities for which would be limited to some approximate estimate of demand, candidates would have to demonstrate college-level communications and computation skills plus knowledge of the subjects they would teach and have some knowledge of child development and other "basics" of education. Admissions would be competitive. After the internship and before preliminary provisional certification, interns would have to demonstrate actual teaching competence.

The internship seems an essential piece in the solution to the teacher quality and quantity dilemma. The first year of teaching, as careers are now organized, is a major source of teacher disillusionment and attrition and is hard on the children being taught. Eliminating practice teaching, which is often ineffective and even counterproductive, in favor of an internship, would free up learning time in college, thus reducing the need for postbaccalaureate training prior to an internship.

Following an internship, teachers would be provisionally certified and would be evaluated carefully with the major goal of such evaluation being professional development. After two or three years of teaching, during which time "provisional teachers" would earn points that could be converted to educational benefits (as with armed forces enlistees), provisional teachers who elected to compete for career status would be screened and certified, would then be screened into career status and certified. Those who chose to continue to teach would receive an additional forgivable loan, which might vary in amount with market conditions, to allow them to complete a master's degree going full-time for a semester and a summer. The transition from provisional to career status is an additional screen during which time salaries would be modest. This process focuses money the society would invest in its teachers on those who are judged most competent and intend to make a career of teaching.[1] Given historically high turnover in the early years of teaching, this seems cost-effective. Furthermore, it seems reasonable to believe that teachers will learn more from graduate work in education after they have taught than before (no teacher I have talked to about this believes otherwise). An assumption underlying this proposal is that relatively low salaries in one's early twenties is of less concern to potential career teachers than the prospect of low salaries throughout one's professional life—no matter how good one is at one's job.

After completion of the master's degree, career teachers would receive a substantial increase in pay and would enter some form of career ladder plan in which evaluation was tied to staff development and career development opportunities, as well as to large salary increments.

In this plan, policies that relate to the provision of responsibility and positive working conditions would have high priorities in states and localities.

This plan would not preclude other modes of entry into teaching that contemplate short tenure as the norm. But it does reject the widely discussed idea that large numbers of teachers will be temporary Peace Corps-type people or would be significantly less well educated than teachers who move to the highest ranks of their profession. To imagine that we should absorb many short-term teachers who typically have little formal preparation other than subject matter courses is to underestimate the complexity of teaching. The idea that smart short-term teachers who know their major subject seems to be based on the college or elite private school model. However, apt as it is for these settings, it seems inappropriate to secondary schools with large numbers of low achievers and to elementary schools, and it is in such schools that we face the greatest teacher shortages. The so-called two-tier plan for the teaching profession also fails to recognize the importance of staff stability and common opportunity in establishing curricular coherence, fostering collegiality, and establishing the shared purpose that characterize effective schools. The idea that we will have two or three classes of teachers with very different talents and preparation also seems to imply ways of organizing instruction that have yet to be invented.

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[1] The early career development plan outlined here is the product of discussions between David Florio and me.

As strategies are considered for improving the attractiveness of a teaching career, it seems important to recognize that one of the attractions of teaching to able people has been that it is a career that can be accommodated better than most to child rearing. Educational reforms such as year-round schools and longer school days may affect this attraction to teaching, even if children spend as much time in schools as do teachers. Obversely, if schools became day care sites (where various "laboratory" courses might be taught) or allowed for part-time teacher employment with full status and opportunities for advancement, they might be more attractive work places to people who want a career and the opportunity to spend time with their children.

A final note. While it remains to be seen whether the public will provide significant funds for teacher salaries, it seems almost certain that such funds will not come without some form of intensive evaluation plan that will result in salaries being based in part on perceived performance. In these evaluation systems lies the key to the attractiveness of the profession—and a dilemma for teacher organizations. The more successful we are in recruiting to and retaining in teaching those who have other career options, the more likely it is that such teachers will demand professional discretion. At the same time, teachers want to be protected from arbitrary action by supervisors or evaluators and may insist that the criteria for evaluation be more detailed and explicit. The consequence of such demands may be the routinization and mechanization of teaching. If teachers are divested of opportunities to be inventive, not only will talented people leave or refuse to enter the profession, but teaching will not be responsive to the enormous variety of needs and talents students bring with them to school each day. The way out of this conundrum for teachers and policy makers is to trust in peer review and discretionary evaluation. That process is fraught with the probability of error but the alternative is bureaucratization and banality.

APPENDIX I.—EXCERPT FROM THE LEGISLATIVE AGENDA FOR 1985 OF THE AMERICAN ASSOCIATION OF SCHOOL ADMINISTRATORS

REAUTHORIZATIONS: TITLE V OF THE HIGHER EDUCATION ACT

1. *Background.* AASA has not commented on the Higher Education Act in the past, but because teacher education is a vital concern to AASA members, and Title V of the Higher Education Act Concerns federal support for teacher education, AASA has determined that it should comment on the reauthorization of this act.

2. *Positions.* Congress should establish a commission much like the Secretary of Education's Commission on Excellence in Education to examine the problem of teacher supply and demand as well as teacher education. In the next decade, there will be a severe teacher shortage, particularly of elementary school teachers. The federal government could render a valuable service by simply developing and monitoring the pool of available teachers, where those teachers are, and what their skill areas are, so that school districts could identify available teachers and would know where to go, and teachers who were unable to find a job in one area could then be able to find positions in other parts of the country. The establishment of a commission to raise the concern for the teacher supply problem and to develop some means of providing information to school districts is of the highest priority and could be of very great benefit to school districts.

Mr. FORD. Irene Spero?

STATEMENT OF IRENE SPERO, ASSOCIATE FOR GOVERNMENT RELATIONS, THE COLLEGE BOARD

Ms. SPERO. Thank you, Mr. Chairman, for the opportunity to testify today on the result of a national survey recently conducted by the Washington office of the College Board that identifies 28 financial aid programs to attract prospective teachers.

Mr. Chairman, the task that confronts us is a difficult one, as all the other witnesses have indicated: How to staff more and more classrooms with qualified teachers, just as the odds of successfully doing this grow smaller and smaller. Today I will talk about one of the policies being used by people at the State level and also at the

Federal level to overcome these odds, the use of financial aid to encourage students to choose teaching as a career.

Can student aid be utilized to achieve objectives such as increasing the number of qualified teachers? Preliminary examinations of recently created State programs raise some questions about their efficacy and may serve as a cautionary message to those still considering their enactment.

Let me briefly summarize the characteristics of existing State student assistance programs for teachers. The most frequently legislated incentive to attract students to teaching provides loans to undergraduates for their teacher education studies. The borrower than cancels a portion of the loan by teaching for a specified length of time. Thus, teaching substitutes for the periodic cash repayment of the loan's principal and interest, the loan is forgiven and becomes, in effect, a grant. Twenty-one States have this type of program currently in place.

An alternative incentive of lesser popularity is the Loan Repayment Program in which the State repays a portion of an outstanding guaranteed student loan or national direct student loan for a currently employed teacher. These programs may be more of an incentive to retain, rather than attract, teachers. Loan repayment programs exist in higher education States. And as you noted earlier, California has one of the largest of these programs.

Loan forgiveness programs derive their momentum from the education reform movement of the 1980's. Two Southern States enacted loan forgiveness legislation in 1982. The rapidity with which incentive programs were passed during the 1983 and 1984 legislative sessions in 25 States suggests an almost bandwagon effect.

The rush to pass such legislation is not over. This testimony analyzes legislation enacted as of January 1985, but the Information Clearinghouse of the Education Commission of the States has identified subsequent actions in Wyoming, New Jersey, New Hampshire, Missouri, and even in one local school district, Jefferson County, CO. The amount of funds appropriated annually for these State programs varies considerably, from $10,000 a year in Vermont to $2.2 million in Texas. At least six States have programs in excess of $1 million.

The loans to individual students also vary considerably in size, from $7,500 a year for up to 5 years in Alaska to $1,000 a year for 2 years in two States. Half of the States provide aid for 2 years and half for 4. States with 2-year programs generally offer more substantial awards, often in the $3,000- to $4,000-a-year range for that time period.

The eligibility requirements for these loans are notable in two respects:

First, the concept of financial need, long the cornerstone of student assistance, is virtually absent. Only the Massachusetts and Washington programs are need based. In Kentucky, need is considered but is of only minor importance. Texas has two loan programs, one of which is need based, and in all the other States financial need is of no consequence.

Second, eligibility for these loan programs is geared at recruiting top students into teaching; thus, these States have combined academic standards with monetary incentives to improve the quality of the teaching force. ACT or SAT scores, grade point average and rank in high school graduating class are common eligibility requirements, and the Perkins Scholarship bill also includes these as criteria for the loans.

Loan repayment plans, on the other hand, do not establish as clearly as the forgiveness programs the linkage between academic standards and incentives to teach. California, for example, specifies the completion of the requirements for a teaching certificate in math or science and an outstanding GSL or NDSL loan balance. Iowa requires that the individual must be teaching math or science full-time, graduate after January 1, 1983, and have an outstanding GSL loan.

The forgiveness component in the loan programs surveyed all permit the recipient to cancel a portion of the loan through teaching as an alternative to the periodic task repayment of the loan's principal and interest. A loan may be forgiven on a 1-to-1 basis; for example, 1 year of assistance for 1 year of teaching, or a year of assistance may require 2 or even 3 years of teaching. This latter alternative may encourage loan recipients to remain in teaching for a longer period of time so that their complete obligation is repaid through service rather than cash.

The majority of the States with programs would require 5 years or less to repay the loan through service; and, in fact, the loan conditions in six States would require only 2 years of teaching.

All the programs surveyed established the terms under which a recipient can buy out the loan through cash repayment as an option to teaching. These buyout provisions are the key to determining how successful student aid programs are in addressing a labor allocation problem. And they can be ranked on a continuum from most lenient—least penalty—to most stringent. In this continuum the interest rate of the teacher loan program as compared with the rate charged in a more general loan program, for example, the Guaranteed Student Loan, is only one factor. If the rate is lower than that of the GSL, for example, a student may seek the loan even though there are no plans to teach. Conversely, if the interest rate is higher than that of GSL, the incentive to participate may be lower but the pressure to enter teaching and have the loan forgiven through service will be higher.

Programs in eight States specify the same interest rate currently used in GSL. Even though the interest rate is identical in these States, the repayment period is often considerably shorter. Three States have rates that are below the current GSL rate, and in the remaining States interest rates in excess of GSL are charged. These rates can run as high as 15 percent in the State of Maryland.

In examining these buyout provisions a relation between them and the amount of aid given by a State reveals a rather puzzling pattern. Some States provide very generous loan amounts for longer periods of time and make it very easy for the recipient to repay in cash rather than service. For example, South Carolina imposes an 8-percent interest rate with 10 years to repay the maximum loan limit of $12,500. Other States provide less assistance and make it more difficult to pay back in cash rather than teaching. An example is the Mississippi program which provides a maximum of $6,000. If a recipient decides not to teach, they are required to pay half of the outstanding loan balance over 3 years to liquidate damages. This pattern raises questions about how effective the program will be as an incentive. If the penalties to repay in cash rather than teach are so minimal that they cause little hardship for the individual, then the program may be less likely to accomplish its goal of increasing the numbers of students who go into teaching.

The State loan programs surveyed, all are focused on specific personnel needs. For example, math and science teachers are the target population in nearly all of the States. Some States evaluate staffing needs yearly in cooperation most often with the State board of education, and that has resulted in adding to these programs teachers for bilingual and bicultural education, special education, foreign language, and speech and hearing in some of the States.

The limited time in which most of these State programs have been operative precludes thorough and conclusive analysis of their effectiveness. However, the precedence of the 1958 National Defense Education Act and the 1963 Health Professions Student Loan Program may provide some insights about the effectiveness of loan forgiveness programs. The success of these programs in increasing the supply of either teachers or health professionals is an open question. A 1968 College Board study concluded that there was no clearcut evidence that the teacher cancellation provision has materially contributed to an increase in either the number or quality of teachers. Similarly, two studies of the Health Professions Student Loan Program by the General Accounting Office concluded that forgiveness provisions were largely ineffective.

Will the recently passed State programs be more effective policy instruments? Complete answers to this question will have to be reserved for several years hence when there is more information on the numbers of participants in each program, their retention in the classroom or their decision to utilize the cash repayment option. In the meantime, data on the experience of two States allow some tentative conclusions and observations. The North Carolina program, the oldest in the country and in existence since 1957, has aided almost 12,000 students since its inception. Of this number a little less than one-half met certification requirements and repaid their loans by teaching, 28 percent of the total recipients repaid their loans by cash, and approximately 10 percent met their obligation by a combination of teaching service and cash repayment.

In Kentucky, 140 recipients have graduated as of May 31, 1985. Of these 140, 73 have found teaching positions, 20 percent are paying their loan by cash, and another 13 percent are on deferred status for one reason or the other. Whether the 73 percent who are currently in the classroom will remain there for the full higher education years necessary to cancel their loan obligation is an open question. The Kentucky situation is also interesting from another standpoint. There are documented reports that the first graduates of the loan program discovered few jobs available to qualify for forgiveness. One explanation might be that existing teaching positions were being filled by tenure teachers in other subject areas who were reassigned to the math and science classroom. This situation is also found in other States as well.

What additional observations can be made? In interviews with program administrators a majority indicated that the programs were not as successful as had been anticipated, and many expressed skepticism about their viability. A commonly voiced viewpoint is the program is probably just financing those who would go into teaching anyway. Perhaps most telling of all is the fact that of the States surveyed over one-half reported the available loan funds were not or were not anticipated to be completely utilized because of insufficient numbers of applicants.

Mr. Chairman, previous hearings have told how difficult it is to meet rising college costs. Why then aren't these programs more heavily utilized by students as a form of financial aid? One can speculate that the reason why students are not going into teaching is more complex than just the ability to pay for college. If that is the case, then offering loans may not affect who enters the profession. I think we need a whole host of answers to this question of increasing the professional attractiveness of teaching as a career. We have talked about low salaries today. We have talked about several other questions. I think until we start addressing factors such as salaries, improved working conditions, more rigorous entry requirements and better opportunities for advancement, these programs will not work. The ability to attract and retain the best and the brightest teachers in adequate numbers will depend first on making teaching a more desirable career and only secondarily on incentives such as loan forgiveness.

I shall be pleased to respond to any questions you might have.

Mr. FORD. Thank you.

[The prepared statement of Irene K. Spero follows:]

PREPARED STATEMENT OF IRENE K. SPERO, ASSOCIATE FOR GOVERNMENT RELATIONS, WASHINGTON OFFICE OF THE COLLEGE BOARD

Mr. Chairman and members of the subcommittee, I am Irene Spero, Associate for Government Relations in the Washington Office of the College Board. I thank you for the opportunity to testify today on the use of financial aid to encourage students to choose teaching as a career.

The College Board, a national association of 2,500 colleges and schools, assists students in making the transition from high school to college and beyond through guidance, admissions, placement, credit-by-examination and financial aid services. The Washington Office of the College Board conducts policy studies on student finance and issues of educational access and quality.

Mr. Chairman and members of the subcommittee, today I will present the results of a national survey recently conducted by the Washington Office that identifies 28 financial aid programs to attract prospective teachers. I shall first summarize the types and characteristics of these programs and then offer preliminary observations about the effectiveness of these initiatives. A brief description of these state programs is attached to my statement.

How to attract and retain sufficient numbers of qualified teachers is a central question in the current efforts to reform American education. Finding the proper response to this question is complicated by adverse demographic trends and negative perceptions of teaching. The supply of teachers, and the demand for them, are moving in opposite directions. As we approach the 1990's, elementary school enrollments will significantly increase just as the college age population (from which teachers traditionally are drawn) will decline. These demographic trends are further aggravated by the low salaries and prestige of teaching that deter many from pursuing a career in the classroom.

Mr. Chairman, the task that confronts us is a difficult one: how to staff more and more classrooms with qualified teachers, just as the odds of this successfully occurring grow smaller and smaller.

In an attempt to overcome these odds, policymakers have enacted "all sorts of magnets to see which ones work."[1] One such "magnet" provides student financial aid in the form of loans that can be repaid, or "forgiven," by teaching. Loan forgiveness programs have been enacted or proposed in over half of the states. On the Federal level, the 98th Congress authorized 10,000 Carl D. Perkins Scholarships, a memorial to a great Congressman, also containing forgiveness provisions.

How effective is this mechanism of loan forgiveness in attracting potential teachers? Can student aid be utilized to achieve objectives, such as increasing the number of qualified teachers? Preliminary examinations of recently created state programs raise some questions about their efficacy, and may serve as a cautionary message to those still considering their enactment.

EXAMINATION OF EXISTING STATE STUDENT ASSISTANCE PROGRAMS FOR PROSPECTIVE TEACHERS

Types of programs

The most frequently legislated incentive to attract students to teaching is a loan program with provisions for "forgiveness." In this incentive model, loans are provided to undergraduates for teacher education studies; the borrower then cancels a portion of the loan by teaching for a specified length of time. Thus, teaching substitutes for the periodic cash repayment of the loan's principal and interest; the loan is "forgiven" and becomes, in effect, a grant. Twenty-one states have this type of program in place. One state, Illinois, has a loan forgiveness program restricted to certified teachers seeking recertification in math and science.

An alternative incentive of lesser popularity is the loan repayment program in which the state repays a portion of an outstanding Guaranteed Student Loan (GSL) or National Direct Student Loan (NDSL) for a currently employed teacher. These programs may be more of an incentive to retain, rather than attract, teachers. Loan repayment programs exist in three states. Three states have both loan forgiveness and loan repayment programs.

Growth of programs

Though state loan forgiveness programs predate the passage of National Defense Education Act—for example, the 1957 North Carolina program—this mechanism derived its momentum from the education reform movement of the 1980's. Two southern states enacted loan forgiveness legislation in 1982. The rapidity with which incentive programs were passed during the 1983 and 1984 legislative sessions in 25 states suggests an almost bandwagon effect.

The rush to pass such legislation is not over. This testimony analyzes legislation enacted as of January 1985, but the Information Clearinghouse of the Education Commission of the States has identified subsequent actions. The Wyoming Legislature enacted a bill and measures are pending in New Hampshire and New Jersey. Loan forgiveness provisions are incorporated in Missouri's Excellence in Education Act. Governors in Montana and Ohio proposed or endorsed the forgiveness loan concept, and state boards or task forces in at least seven other states made similar recommendations. At least one local school district, Jefferson County, Colorado, recently initiated a four-year loan forgiveness program for its own high school graduates if they promise to return and teach in the county.

Size of programs

The amount of funds appropriated annually for these programs varies considerably from $10,000 (Vermont) to $2.2 million (Texas). At least six states—Alabama, California, Florida, New York, South Carolina, and Texas—have programs in excess of $1 million. At the other end of the spectrum, eight states—Alaska, Arizona, Arkansas, Illinois, Indiana, Maryland, Nebraska, and Vermont—have programs of $100,000 or less. The programs in the remaining states are typically within the $100,000 or $500,000 range. One state, Louisiana, has yet to appropriate funds.

Amount and duration of aid

The loans vary in size from $7,500 a year for up to five years in Alaska, to $1,000 a year for two years in two states. Half of the states provide aid for two years and half for four years. States with a two-year program generally offer more substantial awards—often in the $3,000 to $4,000 a year range—for that time period. Two states—Massachusetts and Connecticut—offer higher amounts for attendance at a private institution.

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[1] Richburg, Keith B., "Critical Shortage of Teachers Looms for Nation," Washington Post, Apr. 29, 1985.

Eligibility

The eligibility requirements are notable in two respects. First, the concept of financial need, long the cornerstone of student assistance, is virtually absent in these loan programs; only the Massachusetts and Washington programs are need-based. In Kentucky, need is considered but is of only minor importance in determining eligibility. The North Carolina program was need-based prior to 1984, but is now strictly merit-based. Texas has two loan programs, one of which is need-based. In all the other states financial need is of no consequence.

Second, eligibility for these loan programs is geared at recruiting top students into teaching. Thus, states have combined academic standards with monetary incentives to improve the quality of the teaching force. American College Testing Program (ACT) or Scholastic Aptitude Test (SAT) scores, grade point average (ranging from 2.50 in several states to 3.2), and rank in high school graduating class (at least top half in all states and upper 15 percent in Texas) are common eligibility requirements. Admission to a teacher education program, recommendations, citizenship and state residency are also criteria.

States with loan repayment programs have different eligibility criteria. California specifies the completion of the requirements for a teaching certificate in math or science and an outstanding GSL or NDSL loan balance. Iowa requires that the individual must be teaching math or science full time, graduate after January 1, 1983, and have an outstanding GSL. In Vermont, to be eligible an individual must have completed one year of teaching and have a GSL balance outstanding. Thus, loan repayment plans do not establish as clearly as forgiveness programs the linkage between academic standards and incentives to teach.

Rate of forgiveness

The forgiveness component in the loan programs surveyed permit the recipient to cancel a portion of a loan through teaching as an alternative to the periodic cash repayment of the loan's principal and interest. A loan may be forgiven on a one-to-one basis—for example, one year of assistance may be forgiven for one year of teaching. On the other hand, a year of assistance may require two, or even three years of teaching. This latter alternative may encourage loan recipients to remain in teaching for a longer period so that their complete obligation is repaid through service rather than cash.

Ten states—Georgia, Indiana, Massachusetts, Mississippi, North Carolina, Pennsylvania, Tennessee, Texas, Virginia, and Kentucky—require that a student teach one year for each year of assistance. New York has an even more generous forgiveness schedule—a recipient must teach only one year for each two years of the award. Maryland requires one and one-half years of service for each year of aid. Arizona, Delaware, and Florida require two years of teaching to forgive one year of the loan, while Alabama requires three years for each year of assistance.

Other states specify that a certain percentage of the loan will be forgiven for each year of classroom service. The most common pattern in this instance is to have 20 percent of the loan canceled for each year of teaching. Arkansas, Connecticut, Louisiana, and South Carolina utilize this schedule.

How long it would take for a student to have the loan completely forgiven by teaching depends not only on the rate of forgiveness, but also on the amount and duration of the award. The majority of the states with programs would require five years or less to repay the loan through service and, in fact, the loan conditions in six states would require only two years of teaching. At the other extreme, Alabama recipients are required to teach six years to have their $8,000 two-year loan completely forgiven; Delaware, eight years to forgive a $20,000, four-year loan and Washington, ten years to cancel a maximum of $10,000 in loan assistance.

Buy-out provisions

All the programs surveyed establish the terms under which a recipient can "buy-out" the loan through cash repayments as an option to teaching. These buy-out provisions, the key to determining how successful student aid programs are in addressing a labor allocation problem, can be ranked on a continuum from most lenient (i.e., the least penalty) to most stringent. In this continuum, the interest rate of the teacher loan program as compared with the rate charged in more general loan programs (for example, GSL), is only one factor. Other factors to consider are amount of time for repayment, grace period, date from which interest is charged (i.e., whether interest reverts to the first loan disbursement or to the date when studies were completed), and the legal obligation incurred by the student. Most states require that the student sign a letter of agreement, written contract or promissory note at the time of the initial award specifying the terms to be fulfilled.

The interest rate of the teacher loan program can influence the choice the potential borrowers make about participation in the program. If the rate is lower than that of the GSL, for example, a student may seek the loan even though there are no plans to teach. Conversely, if the interest rate is higher than that of the GSL, the incentive to participate may be lower, but the pressure to enter teaching and have the loan forgiven through service will be higher.

Programs in eight states—Georgia, Iowa, Massachusetts, Mississippi, Nebraska, South Carolina, Tennessee, and Washington—specify the same interest rate currently used in the GSL. The South Carolina and Washington programs also parallel GSL in terms of the length of the repayment period—ten years. In the other states even though the interest rate is identical, the repayment time is considerably shorter—for example, four years in Massachusetts and Tennessee and three years in Mississippi and Nebraska.

Three states have rates below the current GSL rate. In Alaska, the loan must be repaid at five percent within ten years. North Carolina specifies six percent interest with the repayment period open-ended. And Maine charges no interest during the five-year repayment period. Illinois requires reimbursement of the actual tuition to the state, with no interest charged.

The remaining states require interest rates in excess of the GSL rate. Rates range from ten percent in Arkansas and New York to fifteen percent in Maryland. The most prevalent rate is twelve percent in Alabama, Arizona, Delaware, Texas, and Virginia.

A state can employ other strategies to make it difficult for a loan recipient to avoid teaching service. For example, a recipient of a Kentucky teacher loan who decides not to teach is immediately liable for one half of the loan amount plus interest as set by the Kentucky Higher Education Assistance Authority.

Conversely, an examination of the relationship between buy-out provisions and the amount of aid reveals a puzzling pattern. Some states provide generous loan amounts for longer periods of time and make it very easy for the recipient to repay in cash rather than service. South Carolina imposes an eight percent interest rate with ten years to repay the maximum loan limit of $12,500. Other states provide less assistance and make it more difficult to pay back in cash rather than teaching. An example is the Mississippi program which provides a maximum of $6,000. If a recipient decides not to teach they are required to pay half of the outstanding balance over three years to liquidate damages. This pattern raises questions about how effective the program will be as an incentive for students to become teachers. If the penalties to repay in cash rather than teach are so minimal that they cause little hardship for the individual, then the program may be less likely to accomplish its goal—to increase the numbers of students choosing to teach.

Type of teaching qualifying for forgiveness

State loan programs to attract teachers are focused on specific personnel needs. For example, math and science teachers are the target population in nearly all of the states. Alaska specifies that the funds are to go to those preparing to teach in rural schools. Some states evaluate staffing needs yearly in cooperation, most often, with the State Board of Education. As a result, states have added bilingual/bicultural (California), speech and hearing (Connecticut), special education (Georgia, Indiana), and foreign language teachers to critical shortage areas, along with math and science.

Fifteen of the states require that the teaching qualifying for forgiveness takes place in a secondary school. Eleven other states permit teaching in either an elementary or secondary school as a prerequisite for forgiveness.

Though the majority of the states require the loan recipient to fulfill the teaching obligation in a public school, at least 12 states permit service in private schools as qualification for forgiveness.

Administration

Nine states administer their program through the state scholarship or loan agency. Other common administrative patterns are the State Department of Higher Education in six states and the State Department of Education in eight states. Variations on these administrative themes exist in the remaining states.

CONCLUSIONS

The limited time in which most of the state programs have been operative precludes thorough and conclusive analysis of their effectiveness. However, the precedents of the 1958 National Defense Education Act and the 1963 Health Professions Student Loan Program may provide some insights about the effectiveness of loan forgiveness programs. The success of these programs in increasing the supply of either teachers or health professionals is an open question. A 1968 College Board study for the U.S. Office of Education concluded that there was no "clear cut evidence that the teacher cancellation provision has materially contributed to an increase in either the number or quality of teachers." Similarly, two studies of the Health Professions Student Loan Program by the General Accounting Office concluded that the forgiveness provisions were largely ineffective in increasing the number of doctors and dentists in underserved shortage areas.

Will the recently passed state programs be more effective policy instruments? Complete answers to this question will have to be reserved for several years hence when there is more information on the numbers of participants in each program, their retention in the classroom or their decision to utilize the cash repayment option. In the meantime, data on the experience of two states allow some tentative conclusions and observations.

The North Carolina program, in existence since 1957, has aided almost 12,000 students since its inception. Of this number, a little less than one-half met certification requirements and repayed their loans by teaching. Twenty-eight percent of the total recipients repaid their loans by cash and approximately ten percent met their obligation by a combination of teaching service and cash repayment.

In Kentucky, 140 recipients have graduated as of May 31, 1985. Of those 140, 73 percent have found teaching positions. Twenty percent are paying their loan back by cash and another thirteen percent are on deferred status. Whether the seventy-three percent who are currently in the classroom will remain there for the full three years necessary to cancel their loan obligation is an open question. It should be noted that the stringent buy-out provisions might discourage them from leaving teaching.

The Kentucky situation is also interesting from another standpoint. There are documented reports that the first graduates of the loan program discovered few jobs available to qualify for forgiveness. One explanation is that existing teaching positions were being filled by tenured teachers in other subject areas, who were reassigned to the math and science classroom. This situation is not unique to Kentucky. Other states also report that loan recipients applying for jobs sometimes found no vacancies because teachers with seniority were teaching out of area of certification.[1]

What additional observations can be made about the existing programs? In interviews with program administrators, a majority indicated that the programs were not as successful as had been anticipated, and many expressed skepticism about their viability. A commonly voiced viewpoint is "the program is probably just financing those who would go into teaching anyway." Perhaps most telling of all is the fact that, of the states surveyed, over one-half reported the available loan funds were not, or were not anticipated to be, completely utilized because of insufficient numbers of applicants.

Mr. Chairman, previous hearings have outlined the current difficulties of allocating scarce financial resources to meet rising college costs. Why then aren't these programs more heavily utilized by students as a form of financial aid? One can speculate that the reason why students are not going into teaching is more complex than just the ability to pay for college. If that is the case, then offering loans may not affect who enters the profession.

Loan forgiveness programs by themselves may not solve the problem of recruiting and retaining qualified teachers. According to Lewis M. Branscomb, chief scientist of International Business Machines Corporation and chairman of the Carnegie Task Force on Teaching as a Profession, "drawing people to teaching who might otherwise become doctors, lawyers, business managers, or computer scientists will require turning teaching into a profession that offers rewards comparable to those in other professions."

It is not within the scope of my testimony to offer recommendations about how teaching can become a more attractive professional option. The assumption that the low salaries and low status of teachers deters academically talented college students from the classroom is well documented. Factors such as higher salaries, improved working conditions, more rigorous entry requirements and better opportunities for advancement must be addressed. The ability to attract and retain the best and the brightest teachers in adequate numbers will depend first, on making teaching a more desirable career and, only secondarily, on incentives such as loan forgiveness.

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[1] Toch, Thomas, "Teacher Shortage Realities Seen Thwarting Reform," *Education Week*, December 5, 1984, 1.

Thank you, Mr. Chairman, for giving me this opportunity to appear here today. I shall be pleased to respond to any questions you might have.

STATE FINANCIAL AID PROGRAMS TO ATTRACT TEACHERS

Alabama: $1 million in forgiveable loans of up to $3996/year for up to 2 years. Undergraduates and recertification. One year of loan is forgiven by teaching 3 years. No need.

Alaska: $90,000 for forgiveable loans of $7500/year for up to 5 years for undergraduates who plan to teach in rural schools. Loan will be completely forgiven by teaching five years in a rural school. No need.

Arizona: $40,000 in forgiveable loans up to $4000/year for 2 years to undergraduates. One year of loan is forgiven by teaching 2 years. No need.

Arkansas: $100,000 in forgiveable loans of up to $2500/year for 4 years to undergraduates. One-fifth of loan is cancelled for each year taught. No need.

California: $1 million for repaying up to $8000 of outstanding student loan debt over 3 years for current math, science or bilingual teachers.

Connecticut: $350,000 in forgiveable loans up to $5000/year for undergraduates and graduates for 2 years. 20% of loan is forgiven for each year taught. No need.

Delaware: $200,000 for 5 part program including forgiveable loans and teacher scholarships. Undergraduates can receive up to $5000/year for 4 years. Loan is forgiven by teaching 2 years for each year of assistance. Teacher scholarships pay full salary for one year for those seeking recertification in math and science. No need.

Florida: $1.5 million in forgiveable loans of up to $4000/year for 2 years for undergraduates planning to teach math or science or other critical areas. Loan forgiven by teaching 2 years for each year of assistance. No need. Also $300,000 for loan repayment for existing teachers and $200,000 for tuition reimbursement for current teachers seeking recertification in math and science.

Georgia: $135,000 in forgiveable loans for undergraduates of $1500/year for 2 years. One year of loan is forgiven by teaching one year. Also for special education teachers. Need based.

Illinois: $75,000 in forgiveable loans to assist current teachers to prepare for secondary math and science certification.

Indiana: $50,000 for repaying up to $10,000 of an outstanding Indiana GSL over 5 years for current science, math and special education teachers. Also $150,000 for certified teachers to retrain as math and science teachers.

Iowa: $30,000 for loan repayment of up to $6000 of an existing GSL if currently teaching math or science in secondary school; reimburse up to $1000 of loan for each year of teaching. Also $40,000 for forgiveable loans of $1500 for one year for current teachers to advance as approved math and science teachers; loan will be cancelled if you teach 2 years.

Kentucky: $410,000 in forgiveable loans for undergraduates of $2500/year for 3 years. Funds for recertification also. One year of loan is forgiven by teaching one year. Need considered.

Louisiana: Forgiveable loans for undergraduates of $2000/year for 4 years. One-fifth of loan is forgiven for each year taught. No need. No appropriation currently.

Maine: $500,000 for undergraduates and current teachers seeking graduate work. $1500/year up to 4 years. One half of loan is forgiven for each year taught in an "underserved" subject area. No need.

Maryland: $80,000 in forgiveable loans for undergraduates up to maximum of $5000 for 4 semesters. Loan forgiven by teaching 1½ years for each year of assistance. No need.

Massachusetts: $235,000 in forgiveable loans of up to $2000/year for 2 years to undergraduates. One year of loan will be forgiven for each year of teaching. Need based.

Mississippi: $100,000 in forgiveable loans up to $3000/year to undergraduates for 2 years. 2 years of loan is forgiven for 4 semesters of teaching. No need. Also $90,000 in forgiveable loans up to $3000 for summer study for current teachers seeking recertification in math and science.

Nebraska: $100,000 in forgiveable loans for undergraduates of $500/semester up to total $3000. Can be used by current teachers seeking endorsements in math and science. One $500 loan is forgiven for each semester taught. No need.

New York: $1.6 million in forgiveable loans for undergraduates of $3000/year up to 4 years. Loan forgiven if teach one year for each two years of assistance. No need. Also fellowships for graduate study leading to certification as a math or science teacher.

North Carolina: $400,000 in forgiveable loans for undergraduates of up to $2,000/year for up to 4 years; one year of loan is forgiven for each year taught. All prospective teachers, not just math and science. No need.

Pennsylvania: $300,000 in forgiveable loans to undergraduates for a minimum of $1500/year up to 4 years. Loan is forgiven by teaching one year for each year of assistance. No need. Also a loan repayment program for current math and science teachers.

South Carolina: $1.5 million forgiveable loans for undergraduates of $2500/year up to $12,500 maximum. For recertification also. No need. One-fifth of loan is forgiven for each year of service.

Tennessee: $200,000 in forgiveable loans to undergraduates of $1500/year for up to 4 years. Loan is forgiven by teaching one year for each year of assistance. No need.

Texas: $1.2 million in forgiveable loans up to $1000/semester for undergraduates and current teachers for 4 regular semesters for a maximum of $4000. Critical shortage areas. One semester of loan is cancelled for each year taught. No need. $1 million in forgiveable loans to undergraduates and graduates for up to $2500/year to maximum of $5000. Critical shortage areas. After 4 years of teaching loan is completely cancelled. Need based.

Vermont: $10,000 in loan repayment for current teachers of math and science with outstanding loans guaranteed by Vermont Student Assistance Corporation.

Virginia: $120,000 in forgiveable loans up to $2000/year for 2 years to undergraduates. One year of loan is forgiven for each year of teaching. No need.

Washington: $500,000 in forgiveable loans up to $10,000 total to undergraduates. Ten percent of the loan is forgiven for each year taught. Need based.

Mr. **Ford**. I have a letter here from Bill Pierce explaining that he is tied up with a summer institute and he has some specific recommendations.

Without objection, this will be inserted in the record of today's proceedings.

[The letter of William F. Pierce follows:]

Council of Chief State School Officers,
Washington, DC, July 23, 1985.

Hon. **William D. Ford**,
Chairman, Subcommittee on Postsecondary Education,
U.S. House of Representatives, Washington, DC.

Dear Chairman Ford: Since the Council of Chief State School Officers has scheduled its Summer Institute entitled "School/College Collaboration and Building Integrated Teacher Education Systems Statewide", July 28 through August 2, I regret that a representative of our organization will not be available to present testimony on the reauthorization of the Higher Education Act. However, I would like to take this opportunity to provide written comments on the Council's position on Title V. Full testimony will be submitted to the House Postsecondary Subcommittee in August.

The Council proposes the following revisions to the current Title V language:

1. That the language of Section 533(a) (Training for Higher Education Personnel) be abolished and replaced with the following concept:

That any monies available for competitive grants addressing teacher education reform should flow through the state education agencies (SEA) in the first instance. The rationale supporting this position is to bring together into working coalitions schools, colleges and universities, state policy makers, other key persons and appropriate bodies, rather than further dividing these parties. To endorse a conduit other than the SEAs for such funds would endanger many state-based initiatives already underway.

2. That each state education agency which desires to receive grants under this Title shall establish an oversight committee charged with monitoring the flow of funds. This committee, called the State Education Development Council, shall be structured in the following manner:

(1) the chief state school officer; (2) a state board of education member; (3) a dean of a school or college of education; (4) a college or university president or chancellor

of a state-wide university system; (5) a teacher, either elementary or secondary level; (6) a school administrator; (7) a state legislator.

Such a committee at the state level would formalize the state-based coalition efforts, bring together appropriate bodies and in the process, provide a sense of "ownership" in the activities provided for by the legislation.

Thank you for your consideration of the Council's views. Our members look forward to working with you on the reauthorization of Title V.

Sincerely,

WILLIAM F. PIERCE,
Executive Director.

Mr. FORD. How do you feel, at the table, about the teacher corps and the teacher centers that were eliminated in 1981?

Mr. CHASE. Mr. Chairman, I think you asked how we felt about teacher corps and teacher centers being eliminated. I think it is safe to say that both of those programs we believed had great benefit. If we were now to be in a situation where we had to establish a priority-type thing as far as either one or the other being reinstituted, I think it is safe to say that the concept embodied in your proposal that I mentioned earlier would perhaps be the more important of the two, and it would be that particular piece of legislation that we would be pushing for as far as training those and assisting those people who are presently in the profession. That is not to say the Teacher Corps Program is not one that should be continued, or should be worked for, to be reenacted and so on. However, with the problems as they are and the financial problems there are in establishing a priority over one or the other, I think the one I mentioned would have priority as far as the NEA is concerned.

Ms. RAUTH. I would agree with that assessment because I think it is inevitable that teacher education at the preservice level has to change, and that process is going on. I think we will see even more dramatic changes than we have to date.

I would like to make one point about teacher education, and that is that there is a tendency for people to say, well, we should be easing certification requirements, bring in liberal arts graduates because after all we don't think there is that much difference between the people who have come through the old teacher education programs and the liberal arts graduates. Well, the problem is that in the old sense that may be true, but for the first time following 10, 15, 20 years of more sophisticated levels of research on effective teaching we know things that we have never known before. We know a lot about what is going to be effective in certain situations. And it is interesting that the complexity of teaching is being focused through the new research on effective teaching. So we ought to be looking at the preservice teacher education level, No. 1, at how do we take advantage of this much more sophisticated knowledge that the truly professionalized teacher of the future will have to have, and how do we make sure that that is beginning to be in place before certification, before initial certification. So I think that is a process which the teacher education colleges, the teacher organizations, the States are going to have to work on because it is not going to be an easy job. I would agree that the Federal Government could be very motivational in terms of providing new types of staff development in service which are totally different again than anything we have had in the past. And I would ask that in these effective teaching resource centers that one of the requirements in submitting proposals be that these people show that they have a knowledge of what we know about effective ways of changing teacher practice, effective staff development principles, because it is being ignored in school systems across this country today.

Mr. HAWLEY. Mr. Chairman, let me add that I think if we could move away from the idea that training of teachers was something we divided between schools of education on the one hand and then the profession on the other, we would be better off. If we could think about the career of teachers as a developmental process in which teachers become ready and interested in learning different things at different stages in their career and we put universities and teacher organizations and school systems in some sense in competition for the teachers' attention we would create a dynamic which would allow us to avoid some of the traps that we have experienced in the past. I think there are some wonderful models of teacher centers that surely can be done. There are also some models of teacher centers which are captured by a small group of people who think they understand what everybody wants to know. And that problem is true for schools of education as well. It is a fundamental problem of organization. And I think to the extent that we can create essentially opportunities for teachers to create markets for learning we would be better off.

That is a little vague, I could go into that. But what I see is an opportunity to bring together the concepts of teacher corps and developmental centers and perhaps add to that some more teacher discretion to buy services, in effect, from their organization, from schools of education, presumably from some combination thereof as an interesting thing to think about.

Mr. FORD. Thank you. Although both those programs were shot down by Gramm-Latta, when we asked for a comment from the associations this winter on what we ought to write into the law, this is title V as suggested by the associations. AACJC, ACCT, AACTE, AASA, ACE, AFT, AVA, CCSSO, IRA, KAS, NEA, SHEEO, USCC, and NAIS—everybody knows how to write title V. That is really a great deal of variation on how to do the job of strengthening teachers. While there are very distinct differences in the approaches of these associations when you get to how the money gets passed around, each of these associations has a little different spin on the ball for us. We are hopeful that we will be able to put together out of all of this the magic mix, and we will leave everybody a little bit unhappy and a little bit happy with some sort of consensus for it. But it is obvious that all of these associations took some time in responding to our request to concentrate on title V, which doesn't usually get a lot of attention. I think it is an indication of the fact that there is a lot of concern about the quality of education. That is good, but everybody has opinions about fads when they are going on. I hope this lasts long enough for us to see some improvement and for us to take advantage of it. It seems to be working in a number of State legislatures. In States that have not had very good histories of supporting education, you see some rather dramatic things taking place which tells me that this is a national phenomena and these associations are reflecting the concerns that they are reading out there with people. It is still difficult to get anyone to pay attention to you when you talk about the teacher shortage. I say to people in Michigan it is going to hit us very soon, and they say, "What are you talking about? Every time we picked up the paper for the last 5 years we read about more teachers being dropped out of our schools." Yes; but all the youngsters are gone and the average age of a teacher now in my district is getting up there. In order to still be on the job, you had to have a lot of seniority. And I don't think out of 22 school districts that I have as many as two or three where every single teacher is not at the top of the pay scale in terms of years of service. All of the other people who had been working their way up through that system have gone as the population has shifted. This is suburban school districts, suburban to Detroit. In Detroit, I suspect that it is probably as severe, perhaps even a little bit more severe. The only thing that gets them excited in Detroit is when your two organizations get into a big fight, as you just did, over who is going to represent the teachers. I find that very fascinating when everybody says it is hopeless, to have these two groups spending all these resources trying to be the spokesman for a group of people in a hopeless situation. There is still a lot of competition out there.

I don't think that it is unfair to say that the administration did a great deal to focus the attention of the people on the needs of education. I don't think that the result that they are getting out of that is exactly what they had in mind. I think generally it was thought, at least by the President and his budget people, that there would be a revulsion against further governmental intervention and expansion of expenditures and resources for education and that would facilitate dismantling programs. It appears it has been exactly the opposite. People are not saying, as the President said at the AFT convention, we have wasted all the money we have spent at the Federal level in the last 20 years because now "A Nation at Risk" tells us it didn't work. "A Nation at Risk" told the rest of us that we didn't spend enough and we didn't do enough; it didn't say that we didn't do anything right. And the public seems to be picking up on what Gardner really was saying in his report. We expect, incidentally, to have him testifying on this bill before we wind it up. We are trying to arrange a date that will fit his schedule and bring him in from California.

But I appreciate very much the effort that you and your associations have put into trying to prepare a good title V, and I can assure you we are going to do the very best we can to take the best of all your ideas and have a really super piece of legislation so good that even the Senate can't mess it up when we send it over to them.

The committee is adjourned.

[Whereupon, at 1 p.m., the committee was adjourned, to reconvene subject to the call of the Chair.]

[Additional material submitted for the record follows:]

INTERNATIONAL READING ASSOCIATION,
Newark, DE, August 29, 1985.

Hon. WILLIAM FORD
Chairman, Subcommittee on Postsecondary Education,
House of Representatives, Washington, DC.

DEAR MR. CHAIRMAN: The International Reading Association would like to submit the enclosed testimony of Title V as part of the hearing record on the reauthorization of the Higher Education Act of 1965 as amended.

The IRA appreciates this opportunity to share its views with the subcommittee as they work to rewrite the Higher Education Act.

Sincerely yours,

RICHARD LONG, Ed. D.,
Washington Representative.

Enclosure.

PREPARED STATEMENT OF THE INTERNATIONAL READING ASSOCIATION

HIGHER EDUCATION ACT—TITLE V—PROFESSIONAL DEVELOPMENT

The International Reading Association is a professional education association of over 60,000 members and 1,180 affiliate councils interested in literacy, reading education, and developing the reading habit worldwide. The Association appreciates the opportunity to submit testimony for the hearing record of the reauthorization of the Higher Education Act Title V, Professional Development.

This subcommittee is presented with a paradox, how to improve teacher education so that the education students receive from teachers is enhanced without writing a statute that tramples the traditional concepts of academic freedom and local control of education.

Professional educators agree with most Americans that teaching is in need of improvement. Teaching is an ever expanding profession, with new information to be taught and new concepts of human learning to be understood. It is simply not good enough to be teaching today using information and methods that do not reflect the scientific gains made by our country. In fact, teaching today must include the very best of the past—both the classics and the discipline—while being aware of new scientific discoveries which include better methods of teaching.

In ancient Athens, the oral tradition made the lecture and the discussion the sole methods of instruction. Today there is simply too much information and knowledge to be taught using only lecture and discussion methods. Teaching and teachers must accept the explosion of knowledge and thinking.

The advent of the Information Age not only impacts on teaching, it highlights the fact that our society now demands that all children be challenged by an effective and efficient education. Teachers must be able not only to teach but to interact effectively with other professionals as well. For example, individuals who are not native English speakers, who are handicapped by physical or learning problems, or emotionally troubled require specialized services. These referrals, usually made by the classroom teacher, require knowledge and understanding beyond the subject matter itself. Once these specialized services are identified, the teacher must be able to make adjustments within the classroom so that effective individual learning occurs. The requirements of the wider society need to be understood in the schools; today teachers must understand the regulations of state and federal programs as well as the requirements of the courts to understand and respect the rights and responsibilities of the student, of parents, and of the community. All of this information is not mastered by being proficient in a particular narrow subject discipline or content area, it requires a comprehensive professional program of study.

Educating individuals to become competent teachers is not a simple or brief process. It requires an effective integration of theory, methods, and practice, as well as content knowledge.

Some individuals fault the development of too many educational methods courses, whereas others cite the incongruity between theory and methods courses. John C. Manning, President of the International Reading Association and Professor of Education at the University of Minnesota, cites the example of too many professors of education not working directly with their students in the context of actual school classrooms. He urges the integration of practical experiences with children in schools as a key part of any teaching methods course.

Dr. Manning's approach uses not only real classroom experience, but includes experiences for preservice teachers in schools with children who are considered educationally "at risk." He argues, convincingly, that teaching skill can best be nurtured when the student works with children and experienced classroom teachers under the supervision and encouragement of a skilled, well-informed, and caring teacher educator. Then and only then does knowledge, theory, and practice come together effectively. That is, the teacher educator and the experienced classroom teacher must work together to ensure that the preservice teacher receives the best possible professional education and experience before certification occurs.

In South Carolina, the state government decided to link teacher training activities with the regular classroom by interweaving college training in education with the first few years of teaching. This program connects the new teacher with the supervision of their college by building the first few years of teaching into a type of internship program.

Some states are not choosing to explore such innovative methods of teacher training; instead, they are adopting "emergency" techniques. These techniques include programs to rapidly certify teachers by accepting those with an extensive background in a particular discipline but who have little or no formal education in the science and art of good teaching. Although many believe that this will improve the profession, it will most likely only create pseudo-teachers who have little knowledge of human learning, good teaching technique, effective diagnosis or referral, or of legal and ethical requirements.

Surprisingly, many who review the needs of teacher education fail to study one of the key components of teaching in the United States—instructional materials. Although less than two billion dollars is spent annually on instructional materials, some researchers report that over 70% of classroom time is based on these materials. While the requirements of teaching have changed, instructional materials have also undergone a radical change. Teachers used to have few educational materials to select from. Requirements from the school board or state board were few in number or limited the choices available to the teacher. Textbooks were purchased to be in use for extended periods of time. Today, with the computer revolution and the space shuttle probing the outer reaches of our knowledge, history recording events in far-off lands, and new approaches to human learning being identified, textbooks can become obsolete quickly. Teachers who can participate in the selection of new materials are frequently found to have little time or training to decide which textbook will become the school's textbook and learning aid for the next five to ten years. It takes much more than content area expertise to make these kinds of decisions in a school setting.

The federal government does have a role to play in the development of effective teacher education programs. While some have advocated the dissolution of the traditional professional teacher educator model, others are trying to implement positive reform. This can be the basis for a bright future in education. Simply put, the federal government should encourage and reward institutions to develop effective and innovative teacher training programs, programs that build on existing strengths, reject weak or unfocussed programs, and reflect an integrated approach towards excellence in teacher education.

Another solution would be to reward teachers and institutions who initiate change. This could be done, for example, if teachers in one or more schools or school districts plan a long-term program to work with new teachers. This program could include developing seminars and identifying teacher-mentors who will focus on the need to integrate content knowledge, learning theory, good teaching technique, and effective classroom management. Stronger and more positive links must be built between teacher education institutions and the schools themselves in both preservice and inservice teacher education.

A third solution is that the federal government could simply fund high-quality teacher education programs by providing funding to individuals seeking to upgrade their skills, to become teachers, or to improve their teaching. Some standards already in place in the education community could be adopted by the federal government. Professional standards, such as those set forth by organizations like the International Reading Association, are stringent and demanding of excellence for both the individual student and for the colleges.

A fourth solution is that the federal government could provide funds to state education agencies to build coalitions with other state agencies, local education agencies, and public and private teacher education institutions.

The International Reading Association believes in the strengthening of the teaching profession through improvements and reform in teacher education. The federal government, through Title V, can make a difference in teacher education by rewarding and encouraging positive efforts for change in professional preparation programs. The International Reading Association requests that the subcommittee construct a new Title V, one that stresses professional development—emphasizing practical skills, subject matter knowledge, experience, and education that are based on sound, accepted teaching practices and a thorough knowledge of research or reading, cognition, and learning.

GUIDELINES FOR THE PROFESSIONAL PREPARATION OF READING TEACHERS

Developed by the
Professional Standards and Ethics Committee
of the
International Reading Association
May 1978

INTRODUCTION

Reading skills are required by children and adults for success in all educational and in most social and vocational endeavors. All educators are involved in teaching or reinforcing reading skills and in promoting the uses of reading related to their fields and levels of instruction. Therefore all teachers, as well as reading personnel, should be prepared in reading education as it relates to their particular roles, as well as in specific attitudes, concepts, and skills.

Titles used for persons in Roles 1-7 vary widely; e.g., the person in Role 4 may be called reading consultant, reading coordinator, reading supervisor, or reading resource person. For this reason, attitudes, concepts, and skills in this document are related to roles rather than to titles. Furthermore, many persons in reading education are responsible for more than one role. The International Reading Association recommends that every person attain the attitudes, concepts, and skills needed for all assigned roles.

The list of attitudes, concepts, and skills is intended to provide the basis for:

- certification of reading personnel
- development of college and university programs in reading education
- approval of college and university programs in reading education
- assessment of qualifications of persons seeking employment in any of the seven roles
- self-assessment of persons in reading education
- evaluation of the performance of persons assigned to any of the seven roles

GENERAL ACADEMIC PREPARATION

All persons in reading education should have the following:

I. A bachelor's degree plus additional study and/or experience as needed to develop the attitudes, concepts, and skills itemized below.

II. Preparation in foundation courses such as developmental psychology, educational psychology, educational measurement, and learning theory.

III. Preparation as consumers and/or producers of research as appropriate for the role.

IV. Completion of a sequence of professional experiences which includes early and continuous involvement with student learners.

SPECIFIC ACADEMIC PREPARATION

Two general approaches to teacher preparation are currently in use: 1) modules based on sequences of attitudes, concepts, and skills to be attained and 2) credit hour courses. Often these approaches need to be equated. This can be done by studying course content to ascertain that all essential attitudes, concepts, and skills are dealt with in at least one course.

The terminology used here is that of the institutions of the United States. It must be adapted for those in other countries. For the purpose of this document, one semester hour is approximately 15 clock hours of instruction.

To assist those institutions and certifying agencies that use the credit hour approach, the following hours of preparation in reading education (graduate and/or undergraduate) are recommended:

Role 1 (teaching readiness and developmental reading at prekindergarten, kindergarten, and primary levels) 6-9 semester hours, to include preparation in the following areas: developmental reading instruction including diagnostic teaching, children's literature, language development, language arts instruction.

Role 2 (teaching developmental and content area reading beyond the primary level) 6-9 semester hours, to include preparation in the following areas: developmental reading instruction including diagnostic teaching, language arts instruction, reading in the content areas, literature for children/youth/reading-handicapped adults.

Role 3 (teaching clinical/remedial reading) 15-21 hours at the graduate level, to include the following areas: developmental reading instruction, language arts instruction, foundations of language development, diagnosis of reading difficulties, techniques of remediation of reading problems, literature for children/youth/reading-handicapped adults, reading in the content areas, a practicum in clinical/remedial instruction and supervision.

Role 4 (providing consultant service in reading instruction to school personnel) 21-27 semester hours at the graduate level, to include preparation in the following areas: developmental reading instruction, foundations of language development, language arts instruction, diagnosis of reading difficulties, techniques of remediation of reading problems, literature for children/youth/reading-handicapped adults, reading in the content areas, a practicum in clinical/remedial instruction, research in reading, leadership for instructional change, a practicum/internship in consulting and supervision.

Role 5 (directing/supervising systemwide reading programs) 27-36 semester hours at the graduate level, to include preparation in courses covering the following areas: developmental reading instruction, foundations of language development, reading in the content areas, diagnosis of reading difficulties, techniques of remediation of reading problems, literature for children/youth/reading-handicapped adults, research in reading, organizing/managing/evaluating a reading program, leadership for instructional change, curriculum development, a practicum/internship in reading program development and supervision.

Role 6 (preparing candidates for Roles 1 and 2) masters degree in reading plus a minimum of 30 credit hours with emphasis in reading including preparation and experience appropriate to courses taught.

Role 7 (preparing candidates for Roles 3, 4, 5, 6) a doctorate with emphasis in reading education including preparation and experience appropriate to courses taught.

It is further recommended that all persons entering Roles 3, 4, 5, 6, and 7 have at least three years of experience in reading or language arts as classroom teachers in an elementary or secondary school.

SPECIFIC ATTITUDES, CONCEPTS, AND SKILLS

1 Primary teaching
2 Post-primary teaching
3 Clinical/remedial
4 Consultative
5 Directive/Supervisory
6 Teacher training
7 Specialized training

A Attitudes C Concepts S Skills

More than half of these attitudes, concepts, and skills apply to all persons in reading education. Varying levels or degrees of attainment must be expected of persons in varying roles.

Certain of the capabilities listed below are cognitive (C) and can be measured through exams, papers, etc.; others are affective (A) and can be measured through extended observation and/or discussion; others are performance oriented (S) and can be adequately measured only in practicum situations.

I. Language Foundations for Reading								
A. The English language as a communication system								
1. Understands the concept of language as a symbol system for transmitting ideas, information, and feelings	C	1	2	3	4	5	6	7
2. Understands phonemic structure, morphemic structure, semantics, syntactic and intonation patterns	C	1	2	3	4	5	6	7
3. Understands the historical development and the patterns of change in the English language	C						6	7
4. Respects linguistic differences as they relate to sociocultural and economic environment	A	1	2	3	4	5	6	7
5. Understands American English dialects and usage styles	C	1	2	3	4	5	6	7
6. Understands major theories concerned with the processes of language use, especially the process of reading, and the nature of language acquisition	C	1	2	3	4	5	6	7
B. Language development								
1. Understands the principles and stages of physical, socioemotional, and intellectual development	C	1	2	3	4	5	6	7
2. Understands the importance of oral language development as a foundation for beginning reading instruction	C	1		3	4	5	6	7
3. Understands the relationship between continuous language development and readiness for reading achievement at any level	C	1	2	3	4	5	6	7
4. Helps students to develop prereading skills	S	1		3	4	5	6	7
5. Stresses language development in all instructional activities, including play and dramatic experiences	S	1	2	3	4	5	6	7
6. Provides students with experiences for developing, extending, and enriching listening, speaking, and writing skills and relating them to reading	S	1	2	3	4	5	6	7
II. Comprehension								
A. Literal and interpretive comprehension								
1. Develops a functional understanding of comprehension processes	C	1	2	3	4	5	6	7
2. Teaches the tasks of literal and interpretive comprehension	S	1	2	3	4	5	6	7
3. Teaches meaning signals given through language structure and patterns: sentence patterns, punctuation clues, paragraph structures, styles of discourse (narrative, descriptive, expository, argumentative)	S	1	2	3	4	5	6	7
4. Integrates teaching of literal and interpretive comprehension skills with the teaching of the subject matter in the content areas	S	1	2	3	4	5	6	7
5. Teaches meanings of words by developing understanding of context clues, structural clues, figurative language, idiom, and use of dictionary	S	1	2	3	4	5	6	7
6. Teaches students to apply literal and interpretative comprehension skills to materials and tasks of everyday life	S	1	2	3	4	5	6	7
B. Critical comprehension								
1. Develops a functional understanding of the nature of critical comprehension	C	1	2	3	4	5	6	7
2. Teaches students to evaluate material in terms of its recency, accuracy, adequacy, and relevancy	S		2	3	4	5	6	7
3. Teaches students to analyze the logic of statements and to understand the impact of propaganda techniques	S		2	3	4	5	6	7
4. Teaches students to distinguish between reality and fantasy, fact and opinion	S	1	2	3	4	5	6	7
5. Uses varied questioning strategies for developing thinking/reading skills	S	1	2	3	4	5	6	7
C. Reference and study skills								
1. Teaches students to set specific purposes for their reading	S	1	2	3	4	5	6	7
2. Teaches students to use the study aids in books: table of contents, glossary, index, footnotes, appendices, headings, questions	S	1	2	3	4	5	6	7
3. Teaches students to locate materials in a media center/library	S	1	2	3	4	5	6	7
4. Teaches students to prepare and use bibliographies	S		2	3	4	5	6	7
5. Teaches students to use reference materials	S		2	3	4	5	6	7
6. Teaches students to summarize, outline, take notes, and combine information from a number of sources	S		2	3	4	5	6	7
7. Teaches students to vary reading rate according to purpose for reading and difficulty of material	S		2	3	4	5	6	7
8. Teaches students to use an independent study method such as SQ3R	S		2	3	4	5	6	7
III. Word Analysis								
1. Demonstrates an understanding of the interrelatedness of word analysis skills and comprehension skills and of the limitations of word analysis in isolation	C	1	2	3	4	5	6	7
2. Understands that a variety of word analysis strategies is required to meet the needs of individual learners	C	1	2	3	4	5	6	7
3. Understands the differences in procedures for teaching word analysis among the various approaches to reading instruction	C	1	2	3	4	5	6	7

SPECIFIC ATTITUDES, CONCEPTS, AND SKILLS

1 Primary teaching
2 Post-primary teaching
3 Clinical remedial
4 Consultative
5 Directive Supervisory
6 Teacher training
7 Specialized training

	A Attitudes C Concepts S Skills							
4. Teaches a) whole-word recognition, b) phoneme-grapheme relationships, c) use of context in conjunction with other clues, d) structural analysis, e) synthesis of phonemic and structural elements, and f) dictionary usage	S	1	2	3	4	5	6	7
5. Conducts a variety of individualized and group activities to stimulate mastery of word analysis skills	S	1	2	3	4	5	6	7
IV. Enjoyment of Reading								
1. Believes that a reading program must strongly foster pleasure in the reading act as well as skill mastery	A	1	2	3	4	5	6	7
2. Sets an example for students by reading extensively for pleasure and professional growth	A	1	2	3	4	5	6	7
3. Is familiar with appropriate materials for the enjoyment reading of students at the level taught	C	1	2	3	4	5	6	7
4. Is familiar with materials designed to appeal to the reading-handicapped learner	C	1	2	3	4	5	6	7
5. Encourages maximum use of the library	S	1	2	3	4	5	6	7
6. Creates an environment that stimulates the desire to learn to read and to continue reading	S	1	2	3	4	5	6	7
7. Assesses, records, and expands students' interests in reading	S	1	2	3	4	5	6	7
8. Tells stories and reads orally in an effective manner	S	1	2	3	4	5	6	7
9. Involves students in creative experiences such as dramatics, puppetry, and choral reading which enhance the enjoyment of literature	S	1	2	3	4	5	6	7
10. Plans creative experiences in literature to develop awareness of the writer's craft	S	1	2	3	4	5	6	7
11. Directs students to books which help them meet personal needs	S	1	2	3	4	5	6	7
12. Promotes the reading of library materials related to the content areas	S		2	3	4	5	6	7
13. Arranges sharing experiences in which students stimulate each other to read for enjoyment	S	1	2	3	4	5	6	7
V. Diagnostic Teaching								
A. Diagnostic evaluation								
1. Regards diagnosis as an ongoing process, not a one-time activity	A	1	2	3	4	5	6	7
2. Uses observational techniques and administers, scores, and interprets both norm-referenced and criterion-referenced tests to assess readiness for reading instruction	S	1		3	4	5	6	7
3. Uses observational techniques and administers, scores, and interprets both norm-referenced and criterion-referenced tests to assess reading ability at each level of reading achievement	S	1	2	3	4	5	6	7
4. Uses observational techniques and administers, scores, and interprets both norm-referenced and criterion-referenced tests to assess ability in skills necessary to read content area materials	S		2	3	4	5	6	7
5. Identifies patterns of behavior which might indicate physical, social, emotional, and or intellectual impairments that may affect the student's progress in learning to read	S	1	2	3	4	5	6	7
6. Follows the appropriate procedures to refer students to agencies and individuals for in-depth diagnosis	S			3	4	5		7
7. Understands the various methods for estimating achievement level and their limitations	C	1	2	3	4	5	6	7
8. Identifies student interests in and attitudes toward reading	S	1	2	3	4	5	6	7
9. Understands the characteristics, strengths, and weaknesses of different types of measurement devices	C	1	2	3	4	5	6	7
10. Applies principles of test construction to the design and development and or selection and use of instruments for diagnosis	S	1	2	3	4	5	6	7
11. Develops with physicians, psychologists, counselors, speech and hearing specialists, and other specialists case studies of students who have severe reading deficiencies	S			3	4	5		7
B. Organizing school and classroom for diagnostic teaching								
1. Subscribes to the concept of diagnostic teaching as it applies to every learner	A	1	2	3	4	5	6	7
2. Understands the extent of student variability in language aptitude, experience, and skills attainment	C	1	2	3	4	5	6	7
3. Forms and uses in the classroom several types of instructional groups: power (instructional level) groups for initial instruction, flexible specific skills reinforcement groups, interest activity groups for personalized application of skills and for enjoyment	S	1	2	3	4	5	6	7
4. Differentiates instruction as indicated by assessment of students' individual backgrounds, personal adjustment, aptitude, interests, and achievement	S	1	2	3	4	5	6	7
5. Uses a variety of materials suitable for differentiating instruction at a number of difficulty levels and for students with varying needs	S	1	2	3	4	5	6	7
6. Systematically records the results of diagnostic assessment and the progress of individual students in the several aspects of reading development	S	1	2	3	4	5	6	7
7. Modifies instruction on the basis of information in student records	S	1	2	3	4	5	6	7
8. Uses differentiated instruction in the teaching of reading in the content areas	S		2	3	4	5	6	7
9. Develops and uses games and other activities appropriate for diagnostic teaching	S	1	2	3	4	5	6	7
C. Adapting instruction to needs of students with varied linguistic backgrounds								
1. Displays a positive attitude toward the ability of all students of whatever socioeconomic, cultural and linguistic background	A	1	2	3	4	5	6	7
2. Accepts and builds upon all of the students' divergent patterns of language in the early stages of transition to the language of instruction	A	1	2	3	4	5	6	7
3. Understands the difference between oral reading errors and those miscues which are the result of speech variations related to special linguistic backgrounds	C	1	2	3	4	5	6	7
4. Adapts instructional techniques to the needs of students with divergent dialects	S	1	2	3	4	5	6	7

SPECIFIC ATTITUDES, CONCEPTS, AND SKILLS

1 Primary teaching
2 Post primary teaching
3 Clinical/remedial
4 Consultative
5 Directive/Supervisory
6 Teacher training
7 Specialized training

	A Attitudes C Concepts S Skills	1	2	3	4	5	6	7
D. Instruction of students with special reading needs								
1. Empathizes with reading-handicapped learners and their sensitivity to other persons' reactions to their deficiencies	A	1	2	3	4	5	6	7
2. Understands the nature and multiple causes of reading/learning disability	C			3	4	5	6	7
3. Selects and uses a variety of high interest materials and appropriate techniques for helping students with severe reading/learning difficulties	S			3	4	5		7
4. Uses appropriate techniques for teaching reading to the gifted and talented	S			3	4	5		7
5. Develops, equips, and operates special reading rooms, clinics, or other facilities to aid students with special reading needs	S			3	4	5		7
VI. Program Planning and Improvement								
A. Interaction with parents/community								
1. Understands the importance of involving administrators, teachers, parents, students, and the general public in the planning and development of a program	A	1	2	3	4	5	6	7
2. Knows the influence that social, economic, and cultural patterns have on language development	C	1	2	3	4	5	6	7
3. Obtains parental assistance in the home and in community activities which encourage student growth in reading	S	1	2	3	4	5	6	7
4. Interprets the reading/language program to the community	S	1	2	3	4	5	6	7
B. Instructional planning: curriculum and approaches								
1. Believes in superior reading instruction as a top priority in the educational system	A	1	2	3	4	5	6	7
2. Develops a program in reading that will accommodate the needs of all learners	S	1	2	3	4	5	6	7
3. Leads a community to develop a quality reading program within its financial capabilities	S					5		7
4. Values objectivity in judging differing approaches to reading instruction	A	1	2	3	4	5	6	7
5. Appreciates the concerns of content area teachers regarding problems they face in teaching reading as well as content	A			3	4	5	6	7
6. Uses techniques which interrelate skills and abilities of language development, word analysis, comprehension, flexibility of rate, study skills, and literary appreciation	S	1	2	3	4	5	6	7
7. Has broad familiarity with developmental, supplementary, nonprint, and library materials useful in teaching reading	C	1	2	3	4	5	6	7
8. Understands several instructional approaches, including group instruction in a developmental reading series, individualized self selected reading, individualized systems management approach, language experience approach	C	1	2	3	4	5	6	7
9. Organizes groups of students to provide the most efficient use of time available for reading instruction	S	1	2	3	4	5	6	7
10. Organizes groups of teachers in preservice and inservice education to provide the most efficient use of time for reading education	S				4	5	6	7
11. Uses processes involved in curriculum construction and revision	S				4	5	6	7
12. Plans for the integration of reading instruction with other elements of the curriculum	S				4	5		7
C. Initiating improvements								
1. Believes there are individual differences among adults just as there are among children and that this requires multiple approaches to the development of their professional growth	A				4	5	6	7
2. Is willing to counsel objectively with college students whose personality and/or ability precludes the likelihood of their success as teachers of reading	A						6	7
3. Uses a variety of professional resources in seeking solutions to instructional problems in reading and language development	S	1	2	3	4	5	6	7
4. Applies principles of adult psychology in analyzing problems of resistance to instructional change and in leading staff, either in groups or as individuals, around obstacles to progress	S				4	5		7
5. Conducts needs assessment/action research to determine program weaknesses	S				4	5		7
6. Participates in a needs assessment/action research to determine program needs	S	1	2	3	4	5	6	7
7. Works with staff to specify the objectives for a total program of reading instruction	S				4	5		7
8. Plans, conducts, and evaluates inservice programs in reading instruction	S				4	5		7
9. Conducts research in reading instruction	S				4	5	6	7
10. Plans and prepares materials such as bulletins, curriculum guides, journal articles, project analyses, and information releases	S				4	5	6	7
11. Coordinates activities of administrators, teachers, reading personnel, paraprofessionals, volunteers, and other concerned adults in operating an integrated, efficient, total reading program	S				4	5		7
12. Contributes to curriculum development, school personnel policies, and administrative policies related to reading instruction	S	1	2	3	4	5	6	7
13. Uses supervisory techniques appropriate to the task and personnel involved	S					5		7
14. Uses efficient budget procedures	S				4	5		7
15. Functions as a resource person with special knowledge of diagnostic teaching procedures	S			3	4			7
16. Uses effective procedures for evaluation of professional reading personnel	S					5		7
17. Uses effective procedures for evaluation of reading programs school or systemwide	S				4	5		7
18. Prepares statistical data	S					5		7
19. Joins and is active in organizations which stimulate professional growth	A	1	2	3	4	5	6	7

INTERNATIONAL READING ASSOCIATION, 800 BARKSDALE ROAD, PO BOX 8139, NEWARK, DELAWARE 19711 U.S.A.

CALIFORNIA STATE DEPARTMENT OF EDUCATION,
Sacramento, CA, September 17, 1985.

Hon. WILLIAM D. FORD,
Chairman, Subcommittee on Postsecondary Education,
House of Representatives, Washington, DC.

DEAR REPRESENTATIVE FORD: I appreciated the opportunity to present the California State Department of Education's views about teacher training on July 31, 1985, before the House Subcommittee on Postsecondary Education.

As an addendum to my written statement, I am enclosing for submission into the hearing record a description of several unique programs in California. The State Department of Education, local school districts, and postsecondary institutions have collaborated on these programs in the area of teacher training. These programs begin to address the serious problem of teacher shortages in California, and constitute an important component of our overall education reform effort.

As the subcommittee begins consideration of the Higher Education Act, Title V, in the weeks ahead, we would be pleased to provide any additional information you may need.

Sincerely,

JAMES R. SMITH,
Deputy Superintendent,
Curriculum and Instructional Leadership Branch.

Enclosure.

CALIFORNIA MATH PROJECT

In 1982, the Legislature, with the support and assistance of the State Department of Education and other interested parties, created the California Mathematics Project (Chapter 196 of the Statutes of 1982) to "assist existing teachers in gaining skills necessary to increase mathematics proficiency among students."

The California Mathematics Project focuses its efforts on recognizing the most highly competent mathematics teachers, revitalizing their interest and skills in teaching mathematics, and encouraging them to contribute to the improvement of their profession by aiding the in-service education of their colleagues.

While funds for the California Mathematics Project reside with the Regents of the University of California, the University jointly administers the Project with the California State University. Initially, enabling legislation in 1982 did not allow for funding. It was only through the auspices of the State Department of Education, and funds in its Investment in People Program, Exemplary Projects Section, that the California Math Project was funded.

Currently, an intersegmental Advisory Committee of mathematics educators from every segment of California's educational community reviews and recommends funding of local project proposals, as well as establishes the criteria by which the proposals are judged. The Advisory Committee requires that local projects demonstrate to the fullest extent possible matching funds support from their host institutions, participants' school districts or counties, regional Teacher Education and Computer (TEC) Centers, and other sources.

In 1983-84, the California Mathematics Project funded nine local projects. In 1984-85 eleven projects were funded, and for 1985-86 it is expected that ten projects will receive funding. During 1984-85, the Project served approximately 600 teachers in 34 counties in California. These teachers, in turn, have provided services to other teachers in their local areas.

The overriding goal of the California Mathematics Project, as stated in its enabling legislation, is to improve students' mathematical competence through exemplary in-service programs for existing teachers or mathematics. To achieve this goal, the Legislature urged the intersegmental Advisory Council to implement several specific statewide objectives. These include:

1. The Project is to be a cooperatively planned and funded effort.
2. Local projects should be distributed throughout the State so that elementary, secondary, and postsecondary personnel located in rural, urban, and suburban areas may avail themselves of mathematical skills training.
3. The project should define more clearly the standards of mathematical competence required at each school level and develop curricular and instructional strategies to meet these standards.

Evaluation of the California Mathematics Project for program effectiveness in meeting its goals is carried out by the California Postsecondary Education Commission.

THE CALIFORNIA ACADEMIC PARTNERSHIP PROGRAM

The California Academic Partnership Program (CAPP) was established under the Hughes-Hart Educational Reform Act of 1983. This legislation embodied the reform ideas and commitments of the State Superintendent of Public Instruction. The CAPP program has a two-fold purpose: (1) to fund local demonstration projects to improve the academic quality of public secondary schools and increase the number of their students motivated and academically prepared to attend college; and (2) to establish a statewide voluntary cooperative testing program for secondary school students in order to analyze students' readiness for college-level work, and reduce the demand for remedial programs at the Postsecondary level.

The legislation specifies that CAPP will be administered by the Trustees of the California State University in cooperation with the State Superintendent of Public Instruction, the Regents of the University of California, and the Board of Governors of the California Community Colleges.

In 1984-85, the Legislature and the Governor appropriated $1,000,000 to fund the first year of CAPP's demonstration and assessment projects. To date, the Advisory Committee has conducted two proposal solicitations—the first in December 1984, and the second this past May. In December, it received 80 proposals requesting $10,292,863 for a three year period. In May, 61 more proposals were received, requesting $6,035,900 for a two-year period. A total of 20 partnership projects have been funded through June 30, 1986.

The enabling legislation for CAPP requires that school districts and postsecondary education institutions jointly submit applications for grants, and it directs the Advisory Committee to consider the following criteria in selecting among applications:

1. The inclusion of a comprehensive plan for curricular revision or enhancement and instructional change;
2. The participation of postsecondary campus faculty working as equal partners with secondary school teachers to improve the academic quality of college preparatory instruction;
3. The provision of activities and services designed to enhance the ability of students to benefit from college preparatory curricula;
4. The provision of in-service training designed to increase college aspirations of students from groups with low participation rates in postsecondary institutions;
5. Plans for the participation of more than one secondary school;
6. Plans for the inclusion of intermediate or junior high schools in the project; and
7. Plans for the continuation of the project after funding ceases.

Each of the 20 partnership projects that were selected for funding has activities that are primarily academic, in that they propose to demonstrate improvement in the academic performance of the students they serve and in the curricular offering of the junior and senior high schools of these students, regardless of whether they are designed to work directly with students or only with their teachers.

THE MATHEMATICS DIAGNOSTIC TESTING PROJECT

Recognizing that insufficient mathematics preparation posed serious academic difficulties for students entering both university systems, the University of California and the California State University formed in 1977 the Mathematics Diagnostic Testing Project (MDTP). The MDTP designed tests in algebra and precalculus to be used for placement and diagnostic purposes at all UC campuses and most CSU campuses. During the past three years, with the support of the State Department of Education, these tests have been made available on a voluntary basis to an increasing number of high school mathematics teachers who have been administering appropriate versions to their students at various levels.

In 1981-82 approximately 17,000 students at 75 high schools were tested with the MDTP tests. In 1982-83 some 79,000 students at 278 high schools were tested, and in 1983-84 over 1,200 teachers at 402 high schools used these tests with almost 140,000 students. This past year approximately 200,000 students have been tested.

Project objectives

1. To indicate to mathematics teachers at high schools where mathematics courses might be strengthened, thereby improving the effectiveness of curricula and teachers.
2. To provide ninth, tenth, and eleventh grade students with accurate information on their mathematics competencies while there is still time in high school to correct any revealed deficiencies.

3. To provide information to junior and senior high schools on performance standard and curriculum expectations of the California State University and the University of California in the area of mathematics.

4. To assist high school counselors, students, and parents in the selection of appropriate high school mathematics courses based on the student's academic/career plans and mathematics competency.

As a result of an intensive collaborative effort between the State Department of Education (who initiated an amendment to existing legislation) and the postsecondary segments, the Mathematics Diagnostic Testing Project has been written into statute (AB 2398-Hughes) This legislation, known as the California Academic Partnership Program was mentioned in the previous section of this document.

Because of the success of the diagnostic testing program in mathematics, and through support funding from the California Academic Partnership Program, the postsecondary segments and the State Department of Education, are presently piloting a diagnostic test in writing. Also under development is a diagnostic test in chemistry.

THE CALIFORNIA WRITING PROJECT

With the help of the California State Department of Education, the Bay Area Writing Project, which was begun in 1974 by the University of California, Berkeley, has been expanded during the last few years and has become known as the California Writing Project.

The projects that make up the California Writing Project, (there are currently eighteen in the state and several more models nationally), have enjoyed the support, joint planning, and involvement of educators from school districts, offices of county superintendents of schools, the State Department of Education, community colleges, and public and private colleges and universities.

Central to these projects is the selection and training of cadres of teachers in writing. When trained, those teachers then serve as teacher mentors in their own and other schools. Annually at each project center, approximately 25 carefully selected instructors, from the elementary through the university levels, spend six weeks during the summer as university fellows. They are intensively trained to teach writing to students and also to their peers.

Since the inception of the project, hundreds of educators have received summer training. They, in turn have provided in-service education for hundreds of others whose new knowledge has enabled them to improve their teaching of writing.

PUBLIC LAW 98-377: EDUCATION FOR ECONOMIC SECURITY ACT—STATE GRANTS FOR STRENGTHENING THE SKILLS OF TEACHERS AND INSTRUCTION OF MATHEMATICS, SCIENCE, FOREIGN LANGUAGES, AND COMPUTER LEARNING

The Department supports efforts such as P.L. 98-377 by the Federal Government and would further recommend that consideration be given to incorporating the concepts of this program into amendments for the new higher education act.

The federal grant to California under P.L. 98-377 is approximately $8.6 million, of which 70 percent, or $6 million, is allocated to the State Department of Education. The remaining 30 percent, or $2.6 million, is allocated to higher education. The monies are to be expended for the expansion and improvement of in-service training and retraining for teachers and other appropriate school personnel in the fields of mathematics and science, including vocational teachers who use mathematics and science in teaching vocational education courses.

Governor Deukmejian designated the California State Department of Education as the State agency responsible for the disbursement of funds for elementary and secondary education. The Governor also designated for California Postsecondary Education Commission as the higher education agency responsible for the disbursement of the higher education portion of the State's grant.

Recognizing the purpose of the federal law, the Director of the California Postsecondary Education Commission, Patrick Callan and the State Superintendent of Public Instruction, Bill Honig agreed upon a memorandum of understanding regarding a cooperative grant process for the distribution of all California discretionary funds—$3.7 million—for the following reasons:

1. to insure the most effective use of all federal funds appropriated under PL 93-377 for the purposes intended to meet the needs of the State.

2. to provide clear and consistent message to institutions of higher education (IHE) and local education agencies (LEA) regarding the purpose of the law and the State priority of intersegmental cooperation;

3. to establish a state priority for the establishment of 6 to 12 large scale, state-of-the-art, maximum impact elementary and secondary teacher inservice training and retraining projects,

4. to provide efficient and consistent administration of the federal funds to avoid any duplication of efforts at both the local and statewide level.

Under development by the State Department of Education and the California Postsecondary Education Commission is a request for proposals for program innovations and developments in the following four areas:

1. Training program for new teachers who will specialize in teaching mathematics and science at the secondary level;

2. Retraining secondary school teachers from disciplines other than mathematics and science, to specialize in the teaching of mathematics, science, or computer learning;

3. Inservice training for elementary, secondary, and vocational school teachers and for other appropriate school personnel to improve their teaching skills in the fields of mathematics, science and computer learning;

4. Cooperative programs involving institutions of higher education, local or state educational agencies, private industry, and private nonprofit organizations that develop and disseminate projects designed to improve students' understanding and performance in science, mathematics, and critical foreign languages.

THE CALIFORNIA LITERATURE PROJECT

The purpose of the California Literature Project is to put in place the new model curriculum standards in English/Language Arts, with an emphasis on the teaching of a central core of literary works. Specific goals of the Project include:

1. To upgrade the teaching of literature in all of California's high schools;

2. To acquaint a core group of teachers with pedagogies consistent with the Model Curriculum Standards; and

3. To prepare them to share their knowledge and techniques with their colleagues.

The concept for the Project began as an outgrowth of discussions between the State Department of Education and the Postsecondary segments over the need to have a joint cooperative program to implement new curriculum standards. These new standards were a result of an emerging consensus between California's secondary and postsecondary educators, around new Model Curriculum Standards in six content areas:

English/Language Arts, Fine Arts, Foreign Language, History/Social Science, Mathematics, and Science.

To develop the English/Language Arts curricular standards, as well as the other five content areas, the State Department of Education assembled advisory groups comprised of teachers, university professors, school administrators, business leaders and representatives of the general public. The California Department of Education, with strong support from school districts and colleges, is ready to begin the process of putting the new standards in place in the state's 1,030 school districts. This can be accomplished only through an unprecedented statewide teacher training effort.

In cooperation with UCLA's Office of Academic Interinstitutional Program, the California State Department of Education is conducting two events as a first step towards implementing the English/Language Arts standards: (1) a four-day conference for four hundred participants to provide a forum for further discussion of the English/language Arts standards; (2) and a six week summer institute for intensive training of a cadre of one hundred selected teachers.

In the fall 1985/86 semester the newly trained cadre will return to their normal teaching duties but will also devote considerable time and energy to implementing the new standards in their own classrooms. They will receive continued training support during the fall semester, in preparation for the spring 1986 semester when they will begin to train other teachers in their regions.

The 100 members will come from major population centers of the state. Most will be high school teachers; but each regional team will also have a coordinator, a small number of elementary/junior high teachers, school district curriculum administrators, and faculty from two and four-year state colleges and universities. The first year's activities will end with a one week follow-up conference for the cadre in early summer 1986.

TEACHER EDUCATION AND COMPUTER CENTER PROGRAM

Authorization for 15 teacher Education and Computer (TEC) Centers to provide staff development services to teachers and administrators on a regional basis was codified in the Department of Education's supported school reform legislation of

1983 (SB 813, Chapter 498, Statutes of 1983). The TEC Centers are charged with providing staff development resources in all areas of the curriculum, but especially in mathematics, science, technology, and other curriculum areas for which there are significant shortages of qualified, certificated teachers.

The TEC Centers incorporated the staff development functions formerly addressed by Professional Development and Program Improvement Centers and School Resource Centers to provide training in elements of effective instruction and to provide resources to build school site capacities for self-sustaining staff development. In addition, each TEC Center was charged with design and implementation of a computer demonstration center to support the acquisition of computing skills by teachers and students. A software Clearinghouse and a teacher retraining project were also established to provide support for TEC Center activities.

The TEC Centers are located to reflect the general attendance areas of the California State University campuses, which results in geographically diverse network spanning county lines. County superintendents in each designated TEC Center region select one of their county offices as the Local Education Agency to house the TEC Center operations.

TEC Centers are governed by policy boards, including teachers, administrators, as well as members of the postsecondary community. These boards work with TEC Center staff to set service priorities and coordinate with the Loan Education Agency (LEA) to oversee TEC Center functions. Functions include providing services in:

Teaching methodology and instructional improvement training.

Technical assistance to support school-based staff development programs.

Instructional use of computers.

In addition, TEC Centers are charged with accessing resources from business and industry and establishing cooperative relationships with institutions of higher educations. Although the TEC Centers are locally administered, the State Department of Education plays a key role in statewide administration, funding, and evaluation of the programs by ensuring that each center is meeting statewide mandates for educational reform.

Prepared Statement of Ted Sanders, Superintendent of Education, State of Illinois, on Behalf of the Council of Chief State School Officers

INTRODUCTION

Mr. Chairman, I am Ted Sanders, Superintendent of Education for the State of Illinois. In this written testimony, I am representing the Council of Chief State School Officers (CCSSO) as Chair of the Committee on Teacher Education and School/College Collaboration. The purpose of my statement is to outline the position of the Council regarding Title V of the Higher Education Act (HEA).

Let me first express the appreciation of the Council for this opportunity to provide input to the House Postsecondary Education Subcommittee regarding the reauthorization of Title V. As Chair of the Council's Committee on Teacher Education and School/College Collaboration, I can assure you that the Council is greatly concerned about improving the quality of teaching.

OVERVIEW OF ISSUES

The effort to improve teacher education and thereby the quality of instruction in the nation's schools must begin with an understanding of the status and demography of teaching. One common theme concerning the improvement of the nation's schools is that "we must attract more of the brightest young people into teaching." It is true that attracting bright young people into teaching will improve education, but given the projection that over one million new teachers are needed in the next decade, the demand cannot be filled even if the top 20 percent of every college's graduating class went into teaching. Teaching is an enormous enterprise with over 2,000,000 persons now employed as teachers. Even though we in education want the brightest students to become teachers, the teaching force cannot logically expect to attract all of the top 20 percent of graduates because students will choose other careers, and industry and government also will compete vigorously for bright graduates. However, education should claim its "share" of the brightest young people. In fact, data from Judith Lanier, Dean of the College of Education at Michigan State University, indicates that 11 percent of the top 20 percent of college graduates are going into teaching.

Unfortunately, Dr. Lanier's data also shows that 38 percent of the bottom 20 percent of college graduates are also going into teaching, and more importantly and most tragically, local schools are more likely to hire the poor students than the good students. However, local administrators can be trained to ask the right questions and interpret responses so that good students can be identified and hired, as borne out by a program conducted by Dr. Lanier.

Although there is a general shortage of teachers, the shortage of minority teachers is particularly acute. Projections from the 1980 census and other data indicate that by the year 2020 at least 50 percent of the students in public schools will be minority students. The teaching force, however, is largely white and the number of minority students choosing education as a career has declined. For example, in May of 1985 a job fair for prospective teachers in the Pittsburgh area did not have a single minority teaching candidate present. As James S. Smith, from the California Department of Education told the Subcommittee on July 31, California simply does not have enough minority students enrolled in college to meet the demand for minority teachers even if every minority graduate went into teaching.

One reason for the teacher shortage is that while enrollment increases in elementary and secondary schools are expected for the next decade and the retirement rate will increase in the 1990's the number of students studying to be teachers has declined dramatically. According to the National Center for Education Statistics (NCES), the number of students studying to be teachers declined by 39 percent between 1971 and 1981. The number of freshman indicating that they want to teach declined from 19.3 percent of all freshman in 1970 to 4.7 percent in 1982. Low pay, low academic esteem for education, the current national trend toward criticism of teachers, difficult working conditions and until recently a tight labor market have served as a negative inducement to selection of teaching as a career. Also, as many have pointed out, there is no career ladder in teaching except to leave the classroom and become an administrator. Many States and LEAs are examining career ladders, differential pay and other methods of attracting, retaining and rewarding talented teachers, but those efforts have not been in place long enough to establish how effective they are. Teaching simply is not attracting new young professionals.

Further, teaching is a transitory profession. Although, solid long-term data is not available, the first few years of teaching appear to be a revolving door. The 1983 "Condition of Education" reported that 28 percent of persons qualified to teach who were in fact teaching in 1979-80 were not teaching in May 1981. Thus, demand is high not only because of retirements and enrollment increases, but there is a high turnover among teachers. Also, many persons who train to teach do not ever teach. In fact, of 48,000 1979-80 graduates in teacher education, 38 percent did not even apply to teach. Theodore Sizer and Ernest Boyer have recently pointed out the many structural problems that drive bright teachers out of education. Such problems include lack of control over teaching and curriculum decisions, inadequate curriculum and materials, inadequate evaluation and supervision, burdensome paperwork and poor collegial environment. The problems associated with retaining teachers are in part being addressed by the school reform movement, but there is much to be done.

Teaching and education are important and are deserving of careful attention from Congress, business, state government, and the education profession. In 1984 the Committee on Teacher Education of the Council of Chief State School Officers, which I chair, issued a report *Staffing the Nation's Schools: A National Emergency* in 1984. Our report, like others, concluded that the need to improve teaching, while assuring an adequate teaching force, was critical. Among our concerns was the general lack of information about teaching, teacher education, continuing professional development, teacher licensing, teacher evaluation, teacher compensation and other rewards or incentives and teacher retention. In general we concluded that the major problem areas were: attracting able persons into teaching, improving teacher preparation, establishing coherent licensing standards that encourage professional development, and retaining teachers especially the best teachers.

The generally fragmented teacher education, selection, licensing and compensation systems are probably at the root of the difficulty in understanding the "condition of teaching." However, we felt that colleges, State education agencies and local education agencies could act jointly to address the coming crisis in assuring an adequate supply of able and qualified teachers.

REVIEW OF STATE EDUCATION AGENCY EFFORTS IN TEACHER EDUCATION

Based on our review of teaching, we felt that the need to "guarantee a synergy" between elementary secondary and postsecondary education was *critical* to improve the quality of instruction and administration in the nation's schools. We were able to begin addressing our concerns through a series of modest private foundation grants to 14 state education agencies (SEAs). As a result, we have valuable experience in nurturing this kind of synergy for collaborative efforts. Indeed, the programs administered by the Council have resulted in major statewide coalitions which are building integrated efforts to improve teacher training and retraining.

Originally, thirty-nine states and territories were awarded $2,000 in planning grants and urged to establish a collaborative effort to improve teacher education both for prospective teachers and teachers who were in the classroom. If states desired, they could then apply for additional funding to develop collaborative efforts between the state department of education, colleges and universities and local school districts. Fourteen states were awarded grants (approximately $30,000) to actually develop and begin implementation of their plans.

Interestingly, a number of states that did not receive development grants sought other funds and continued their efforts. Before coming to Illinois in January of this year, I was State Superintendent of Public Instruction in Nevada. Nevada was not awarded a development grant but interest in pursuing the goals of the planning effort was so high that a number of businesses funded our efforts. Those efforts resulted in a monograph to be distributed to high school students and their parents to assist them in planning their school experience to maximize academic success in college. Given the successful experience, the State board of Education, the University Board of Regents, local school districts, and the state teacher's organization collaborated to improve the quality of teachers. This initiative resulted in a comprehensive plan to address policy issues regarding admission into teacher training programs, assessment of teacher candidates' knowledge and skill prior to certification, induction into the profession, and performance evaluation of teachers currently working in the states' classrooms.

It may be helpful to cite a few other examples of how collaboration on teacher education had an immediate impact on decisions regarding teacher education and certification.

Iowa: The Governor has included in his budget four times from the project task force report regarding career ladder plans for teacher certification; reduced teaching load during the term of provisional certification; the master teacher plan; and testing teacher education candidates beginning in 1986.

Florida: The project to construct transitional programs for minority students between local schools and colleges and to provide high quality inservice training for teachers has now been expanded beyond the pilot program which originated in one county to the entire state. The Florida legislature has commissioned the project task force to study the cooperative relationships of the state's community colleges and school districts and make recommendations as a result of its activities funded under this program.

New York: The task force project was cited in support of two related legislative programs for which appropriations of $6 million each were recently passed for Teacher Centers focused on: 1) Teacher Resource and Computer Training Centers; and 2) The Empire State Awards for Math and Science Teachers, which constitute forgivable grants intended for teacher candidates in these disciplines.

Colorado: The state legislature withdrew directives on teacher evaluation in order to allow the project task force to test its own evaluation instrument developed as a result of this grant. This instrument is currently being pilot-tested on 160 student teachers.

Admittedly, these modest funds have been far from adequate to bring about the kind of wholesale reform needed in teacher education. However, this experience has made chief state school officers even more aware that a coordinated effort is essential to improve preservice and inservice training for teachers. The project has proven that the SEA can serve as a "broker", i.e., all parties can be regularly convened and the SEA can act as a secretariat for the joint efforts to improve teacher education and training.

The development of improved teacher training frequently ignores the potential contribution of SEAs and LEAs despite the millions of state and local dollars expended for teacher training. The exclusion of SEAs from federal efforts to improve teaching and administration of our schools is based on an inaccurate perception of the role of SEAs in teacher preparation and continuing professional development. Some of the misperceptions surrounding the SEA role in teacher education are:

That SEAs are not involved with higher education, especially teacher education, nor play a vital role in that domain;

That those areas such as inservice training and preservice teacher training, which are outlined in Title V of current law are not being served already by state education agencies;

That the SEAs are not already providing substantial financial support for teacher training in the states, nor support for the professional development of those teachers or school administrators;

That teachers are trained and educated *only* within the colleges or schools of education, and not within the whole university.

The state education agencies, by tradition and by design, are actively involved with many facets of higher education within the states; in fact, five chief state school officers are responsible for both elementary/secondary and postsecondary education in their respective states. Beyond this, however, all state education agencies, with no exceptions, have developed working relations with the higher education communities in the states. Furthermore, millions of dollars mostly from state sources, but also from federal sources are administered by the SEAs in support of teacher preservice and inservice training. Beyond direct aid an incalculable amount of in-kind support is provided to school districts to advance such activities. The federal role in teacher education and the improvement of schools would be ill-served if expended to work at cross-purposes with these state efforts. With that background view of the issues in teacher education and the experience gained through CCSSO and SEA efforts to address the issues associated with teacher education the Council would like to make the following recommendations.

RECOMMENDATIONS

1. For building collaboration

In order to institutionalize many already established collaborative programs between elementary/secondary and postsecondary and to promote further collaboration in creating constructive and lasting reforms in teacher quality, CCSSO recommends that Section 533(a) (Training for Higher Education Personnel) of the current Title V legislation be modified to provide competitive grants to improve teacher education and that these competitive grants be channeled through the state education agencies. The rationale supporting this proposal, reflecting the Council's own experience, is that bringing together schools, colleges and universities, state policy makers, and other key persons and appropriate bodies into working coalitions, rather than further dividing these parties, produces goodwill and new solutions to old problems. A federal policy that supports collaboration also provides the opportunity to enhance the many state-based initiatives already underway and would avoid establishing activities which work at cross-purposes within states.

To this end, we recommend that Title V funds be administered under the auspices of a broadly based oversight committee (the State Educator Development Council), made up of at least the following members: a) the chief state school officer; b) the state higher education executive officer; c) a state board of education member; d) a dean of a school or college of education; e) a college or university president or chancellor; f) a teacher; g) a school administrator; h) a state legislator. The oversight committee insures that no single agency or institution could exert undue control over competitive federal grants for teacher training. The state-by-state formation of a State Educator Development Council would formalize the coalition building efforts in the states which apply for Title V funds, bring together representatives of all appropriate bodies, and establish ownership in the enterprise of initiating and implementing statewide teacher education reform.

2. Recommendations for needs assessment and evaluation of teacher education programs

Based on the experience with the 14 collaborative programs, CCSSO recommends that competitive grants to states for teacher training be awarded for five years' duration, the first year being utilized for statewide needs assessment and long-range planning in one or all four of the Council's stated policy areas.

The areas which should be included in a statewide needs assessment include at least the following items:

(a) Projection of the prospective supply and demand of teachers in the state, and comparison of this to national trends;

(b) Description of how federal funds will improve the areas of teacher recruitment, retention, and improvement in the proposed five-year period;

(c) Assessment of the ability of the state's teacher training institutions, the state education agency, and local education agencies to meet prospective needs;

(d) Description of how projects funded under Title V will enhance collaborative activities among state and local education agencies, institutions of higher education, and state policy makers.

In light of these few examples of needs assessment, the Council would also recommend that an evaluation plan be included in state applications that includes a mid-course assessment and a major final evaluation. The possibility of a mid-course assessment is important in creating a sense of freedom and flexibility to drop ideas that are not working out and add new ideas that have merit.

The Council strongly encourages a reasonable element of creativity and flexibility in the funded programs. Although some restrictions are necessary in such funding, too many restrictions may force bogus solutions on complex problems. Therefore, the Council recommends that state programs have the latitude to encompass a wide variety of areas in teacher training and retraining, appropriate to the needs of the state.

3. Recommendations for collaborative preservice and inservice training

A first step in assuring an adequate force of bright and able teachers is attracting young people into teaching. The data that indicates that the number of persons studying to be teachers declined by 39 percent between 1971 and 1981 is devastating when considering the need to rapidly increase teacher supply.

Some of the preservice activities recommended by the Council for Title V funds under Part B include:

Programs to recruit and train professionals from other fields into teaching. New Jersey is now pioneering in this area. This alternative may bring on a new set of problems, but it is one source of able well trained teachers.

Programs to attract college and university students with superior qualifications into education, and to assess the progress and effectiveness of prospective educators during their training. One such program could be modeled on the ROTC.

The philosophy of ROTC is also applicable to teaching in that ROTC strives to obtain bright college graduates who will serve for a few years but may not want a military career. Teaching could also attract bright young people through the financial incentives ROTC provides even though many would not want a career in teaching. This also recognizes that teaching, like all other professions, has an attrition rate. Further, like ROTC teaching could attract people who are more willing to accept difficult assignments because they like challenges and because they may not feel that they will be in the military or teaching forever. Finally the ROTC model would provide a cadre of prospective teachers for summer projects such as teaching disadvantaged students.

Projects which will enhance the ability of collaborative enterprise made up of institutions of postsecondary education, local education agencies, and state agencies to participate jointly in the preparation of future education personnel.

Development of field-based internship programs in preparation for future teachers. Prospective teachers need to have a better understanding of what teachers actually do, and get more structured experience, actually learning to teach. Such field-based experiences may reduce the number of persons who study education, but never actually teach.

Establishment of laboratory schools geared specifically toward the improvement of teaching skills. The number of laboratory schools have declined because they are expensive to operate, but they offer more accessible environment, completely devoted to training.

Beside the need to attract more young people into teaching, we must act to slow down the attrition rate among teachers. Every profession has an attrition rate, but the data noting that 28 percent of 1979-80 teacher graduates who went into teaching taught only one year before leaving education is shocking. The teaching environment must improve by returning some control to teachers, improving administration and evaluation and providing opportunities for professional growth and development. Retaining teachers is not enough, we must retain the best teachers.

Under Part C (Activities Designed to Retain Education Personnel and Improve Their Performance) the Council recommends such programmatic activities as:

The establishment of exchange programs between colleges/universities and secondary schools, designed to allow faculty of each to practice for periods of up to one year at education levels different from those for which they are generally responsible;

The establishment of exchange programs between public elementary and secondary schools and private businesses which will allow faculty of such schools to gain practical experience in the business world in ways related to their disciplines;

The establishment of programs designed to assess the skills of practicing educators, and to redress any weaknesses in performance;

The establishment of professional development centers in LEAs or collaboratives of LEAs to improve teaching skills.

The establishment of programs which purchase release time for teachers in order to allow them to participate in additional academic and practical training;

The establishment of programs for administrator training which utilize field-based internship experiences to enable them to improve managerial and leadership skills;

The establishment of field-based programs designed to enhance the skills of paraprofessionals such as substitutes and teacher aides.

4. Recommendations for retention of current title v provisions

Finally, in addressing revisions to the current language, the Council wishes to acknowledge that it endorses the retention of Part C (Training Teachers to Teach Handicapped Children) as Part E, and the existing Part E (Carl D. Perkins Scholarships) as Part F (National Talented Teacher Fellow Program).

The Council thanks the Committee in advance for its consideration of our position and looks forward to working with you on the reauthorization of the Higher Education Act.

REAUTHORIZATION OF THE HIGHER EDUCATION ACT

Title V (Teacher Training) and Title I (Continuing Education)

Volume 7

THURSDAY, SEPTEMBER 5, 1985

House of Representatives,
Subcommittee on Postsecondary Education,
Committee on Education and Labor,
Washington, DC.

The subcommittee met, pursuant to call, at 9:40 a.m., in room 2175, Rayburn House Office Building, Hon. William D. Ford (chairman of the subcommittee) presiding.

Present: Representatives Hayes, Perkins, Penny, Gaydos, Gunderson, McKernan, Henry, and Goodling.

Staff present: Thomas R. Wolanin, staff director; Kristin Gilbert, clerk; Marlyn McAdam, legislative associate; Rich DiEugenio, minority Republican senior legislative associate; and Rose DiNapoli, minority Republican legislative associate.

Mr. Ford. I am pleased to call to order this hearing of the Subcommittee on Postsecondary Education as we continue the hearings on reauthorization of the programs contained in the Higher Education Act.

This is our 17th hearing here in Washington on specific facets of the Higher Education Act. We have also thus far had 10 field hearings. We have more than 80 hours of testimony now in the record on the reauthorization, and we have five more Washington hearings and two more field hearings scheduled, at which time we will be prepared to proceed with the bill.

Today's heairng will focus on title I of the Higher Education Act, "Continuing Postsecondary Education Program and Planning." Title I authorizes education outreach programs, including grants to States for comprehensive statewide planning for improving access to postsecondary programs, coordinating educational and occupational information, and providing counseling services for traditional and nontraditional learners. Discretionary grants are also authorized to develop innovative educational delivery systems, expand educational resources for underserved adults and promote regional programs of continuing education.

Although no funds have been appropriated for title I in recent years, it can once again become an important mechanism for improving educational opportunities for nontraditional students and for enhancing the quality of lifelong learning.

Although the National Advisory Council on Continuing Education will not be testifying today, I would like to point out to my colleagues that it did present comprehensive testimony at our hearings in St. Louis on May 31, and their views are, indeed, part of the hearing record at the present time.

Our first witness this morning will be our colleague, Hon. Steve Gunderson from Wisconsin.

Mr. GUNDERSON. Thank you, Mr. Chairman.

I think those of you who know me know I seldom, if ever, go to this side of the table. This is one of those few times that I do so because I feel so strongly about the particular issue of title I and the nontraditional student. It is an interest that I have had during most of my career here in Congress, and I am going to ask unanimous consent that a long statement be made a part of the official record.

Mr. FORD. Without objection, it is so ordered.

Mr. GUNDERSON. Brief comments. Rather timely was the fact that yesterday when I was reading a summary of news articles from my district I found that one of my postsecondary technical schools reported this year for the first time that they had more nontraditional students than traditional students enrolled in their particular school. This is, I think, indicative of a trend that we are seeing across the country; and as we try to deal with the whole issue of reauthorization of the Higher Education Act, we must be ever mindful that the purpose of reauthorization is to update laws to the new and present needs affecting that particular governmental program, and its participants. I think there would be nothing that would be more unfortunate than if we were to go through the reauthorization process of the Higher Education Act and not make a significant commitment to the concept of the nontraditional student who by 1990 in this country will probably comprise around 50 percent of the enrollment of our higher education community.

I am not going to spend a great deal of time talking about the changes that have brought this about, but I remember back in 1982 in the depths of the recession when Lane Kirkland came before this same committee and was talking, he kind of hit me over the head, as well as others of the committee when he said, you know, from an education and labor perspective you ought to remember that as many as one-third of those people who are presently laid off will never be called back to work, not because they have been laid off by some downturn swing in the economy but rather because they simply have been replaced by higher technology. Now we have a double responsibility: One to provide, obviously, a new economy but, second, to also provide new training for those who have been replaced.

The average young person who graduated from our schools this last spring is going to have no less than four different careers during their lifetime. How are we going to respond to their changing careers, to say nothing of keeping those who are in the respected professions a viable part of that particular process so they can keep their jobs.

And, third, of course you have got the sociological changes that have occurred in our society. Most of those I think in terms of men and women working equally, et cetera, are all positive; but we have seen, obviously, the single parent family increasing and the responsibility that includes.

As a result of all that I have tried to focus on this whole issue of the nontraditional student. It is no secret to anyone in this room that the present title I is in essence unfocussed and as a result of that has been unfunded and as a result of that has been unable to make any kind of commitment to the program for the nontraditional student that we have so desired.

As a result of that the bill that I introduced in the last session, and introduced again this session, with many members of this subcommiteee as cosponsors, H.R. 1473, tries to focus on institutional development and change to serve the adult learner. I will be the first to tell you that title IV needs to also be revised to respond to the nontraditional student. I think many of us are talking about it. We have not come up with a clear, concise, competent way to resolve that issue.

My bill, H.R. 1473, only deals with title I. It deals with three, in essence, competitive grants. One is oncampus grants, competitive oncampus grants to try and allow universities, colleges to adapt their programs to the nontraditional student on campus: Evening programs, weekend programs, child day care to a whole host of such type of opportunities.

A second is offcampus programs similar to competitive grants. These would be for the area of something that I understand GW does here in this community, and that is they frankly take their college over to the Pentagon. After the regular working hours are completed at the Pentagon for most civilian employees, they have an opportunity simply to go into certain rooms and take a course. I think we need to expand on that type of thing and find ways in which we can take our higher education community to the work force rather than expecting them to do just the reverse.

The third is competitive grants in the area of research. Let us be honest. We do not know fully today the magnitude of the nontraditional student, the specific needs of the nontraditional student, what will or will not allow that student to reenroll or enroll in college. Everything from money to time to information to personal considerations to fear of failure, all could be a part of that. There could be many more. We may or may not be responding correctly.

I, Mr. Chairman, do not want to take any more time to discuss this issue at length. I think those of you who know me have heard many of my diatribes in this regard before. I just want to thank you for the opportunity.

Mr. FORD. Thank you.

In the last Congress I cosponsored your bill and did not this time not because I have changed my mind but merely because I tried, anticipating this reauthorization, to avoid cosponsoring bills that would clearly become a part of the reauthorization.

I would suggest to you that Mr. Williams, who is going to be here and is not here yet, has a version of title I and you have a version of title I, and I think the committee would be very grateful if you and your staff and he and his staff were to start working out what you think, as two people who spent the most time concentrating on this, we ought to be doing and help us come up with a draft.

Mr. GUNDERSON. I have no problem with that. I had understood I would be sharing the table this morning with Mr. Williams and look forward in that regard.

Mr. FORD. He was not able to be here, but I know he is indicating to his staff the appropriate willingness to work out whatever differences you have.

Mr. GUNDERSON. Be glad to do that, Mr. Chairman.

Mr. FORD. Thank you.

Mr. Goodling.

Mr. GOODLING. First of all, I want to thank my colleague not only for his efforts on this legislation, but I do not know whether the education people out there understand what a friend they have in Congressman Gunderson when it comes to education, whether it is secondary, vocational, higher education, whatever it is. I know because I work very closely on all education issues with you. I am a cosponsor, unlike the chairman, of H.R. 1473. I think the focus is necessary.

I would have one question. One of the criticisms I understand we get of H.R. 1473 is that we have not included proprietary schools.

Mr. GUNDERSON. We have included the nonprofit, it is my understanding just not the profit schools. Is that not correct? And the reason for that was not to take a position one way or the other on the issue of the proprietary for profit schools, rather to simply deal with this as it had been dealt with generally, traditionally in the past, which is we would make those eligible for title IV of the Higher Education Act and not eligible for the other sections. If our subcommittee decides in its wisdom to expand that, fine. We just did not want to get into that issue one way or the other. We are silent on it. We are not biased.

Mr. GOODLING. Have we been working with the Williams legislation at all?

Mr. GUNDERSON. I have personally not seen a draft of the Williams bill.

Mr. GOODLING. I have.

Mr. GUNDERSON. I am more than willing to work with him on that. I am sure the concepts that we are going to try to evoke at this point in time are not going to be that different. I do not think that they can be that different at this point in time. We are obviously talking about such sums, some type of grants for the most part to the university community to try and either develop or innovate, implement the various programs.

Mr. GOODLING. I have no other questions, Mr. Chairman.

Thanks again.

Mr. FORD. I think we raise a question of the proprietary institutions. I would suggest to the gentleman from Wisconsin in my area I am pleased they have come into the last part of the century, as many Midwestern areas have, by the very rapid technologically changing job market that is taking place. They have found it advantageous to enter into arrangements with proprietary schools that have an ongoing speciality in some field and they contract with them, elementary and secondary schools primarily in vocational programs. They are doing that and our community colleges are doing some of that as well.

In some fields there are existing curriculums and programs that they find would be cheaper to work with than to try to replicate and to buy all the equipment and everything for a school. So I hope that we leave the door open for that sort of thing to continue.

Mr. Henry.

Mr. HENRY. Thank you, Mr. Chairman.

I am one of the cosponsors of Mr. Gunderson's proposal, and I know he would be the first to admit that we have had difficulty in getting a focus on this whole area of continuing education, including the demographics of the group we are trying to target. Clearly with the rapidly changing technologies of the workplace, where it is now estimated that an average person who is a college graduate will have five career changes, major career changes, in his or her lifetime this is simply a critical issue. We also all see it in our local colleges and our local universities and our community colleges, this tremendously changing demographic profile.

And I think you have hit the nail on the head, Mr. Chairman, if you do not mind my saying so. It is kind of nice to first agree that the necessity is there, but then to get this to interface with the other kinds of more socially defined programs rather than classically, educationally conceived programs in community colleges, vocational ed, where the Federal Government is heavily involved, job training programs, JPTA, and all of the host of other targeted programs where there is a long and distinguished record of Federal involvement. The difficulty here is finding the correct fit, so each program is specific enough to have its own focus, and I know the sponsors share that concern and you have alluded to it. And if we can find that fit, I think we can respond to a very serious problem.

Mr. GUNDERSON. I think it is important that we are sensitive to exactly what you talked about, the career change and the technological change, et cetera; yet I also want to caution all of us, myself included. I have worked with Mr. Goodling in particular and others last session on the Vocational Education Act and believe so strongly in that, but I do not think we want title I to become a Vocational Education Act of the Higher Education Act. We are still talking here of a general higher education degree, liberal arts education, et cetera; so we are going to have to walk a very delicate tightrope to do exactly what you are saying without becoming another Vocational Education Act.

Mr. HENRY. Thank you, Mr. Chairman.

Mr. FORD. Thank you.

Mr. Gaydos.

Mr. GAYDOS. I wish to commend my colleague for making an appearance. I had the pleasure of serving with him for a few years and know his desires are always esthetic and well placed. I congratulate you and as a matter of record I recognize the very simplistic but comprehensive approach you have taken. I am not a cosponsor on H.R. 1473 although I have great sympathy for the thrust of the legislation. As usual, you are right to the point. You are quite logical and factual in your approach, and I think it is an appropriate suggestion that you have in H.R. 1473 as I read it. It is a good statement and I want you to know it is always a pleasure to serve with you. You give good service to this committee.

Mr. Gunderson. You are my first leader in terms of being a chairman of a subcommittee where I was the ranking member, and you have a special place with me for a long time, you know that, Joe.

Mr. Gaydos. It is compliment coming from a colleague.

No questions.

Mr. Ford. Mr. Hayes.

Mr. Hayes. Thank you, Mr. Chairman.

You know what my attitude is about Johnny Come Lately. I got here late and I did not hear your statement. I am sure the words of wisdom were imparted in the statement of my colleague, Steve Gunderson, and I will read it with interest and have been for some time looking at H.R. 1473 and certainly think it is something I can support.

Mr. Gunderson. Thank you

[The prepared statement of the Hon. Steve Gunderson follows:]

Prepared Statement of Hon. Steve Gunderson, a Representative in Congress From the State of Wisconsin

Mr. Chairman, I appreciate the opportunity to address the Subcommittee this morning, particularly as we consider the direction to be taken on Title I of the Higher Education Act. I commend you for holding this hearing in order that we may focus on the needs of the adult learner and the vast importance of continuing education.

A priority of our reauthorization must be to bring the Act up to date with current facts and trends in the higher education community. One trend which is quite apparent is the shift of our college population toward the older student. These are nontraditional students who are attending college for the first time, or they are adults who are returning to higher education to seek further training, retraining, or skill improvement.

Today older students already account for 41 percent of our college and university student body, compared with 38 percent in 1980 and just 28 percent in 1970. These trends are further confirmed by enrollment studies of our student bodies in the last decade. From 1973 to 1983 enrollment for all students was up 28 percent, but enrollment for older students was up by 70 percent during the same period. And, recent studies indicate that adult learners may comprise nearly 50 percent of our student body by 1991. Yet our current law, and to a certain extent our colleges and universities, have not come to grips with these trends.

Unquestionably, those beyond the traditional college ages of 18 to 22 have a growing interest in additional education, but what really accounts for this increasing shift in our college population toward the older student? Certainly ours is a progressive society and America sometimes seems to stand for change as much as it does freedom, democracy and the other principles of our Constitution. Economically, demographically, and socially we encounter America in evolution. In this change a number of trends are apparent, presenting themselves as evidence of the sweeping reformation we are undertaking and an evolution our education community must too recognize.

When we look at our economy, as a first trend, the impact of technology has become everpresent. Computers and word processors are common tools of business. In a sense, we have undergone a microchip revolution. This industry has grown 600 percent in the last 10 years—from $5 billion in 1973 to $30 billion in 1983. The impact of these changes is significant. Lane Kirkland of the AFL-CIO has suggested that nearly one-third of those currently laid off will not get their jobs back; they have been replaced by technology.

In addition, our society is evolving toward a service oriented, information economy, replacing the manufacture oriented, industrial economy of the past. While overall employment levels will continue to increase in the coming years, the number of blue collar jobs will shrink. At the same time, the administrative white collar sector will grow significantly. Finally, as has been evident in recent years, the service sector of our work force will have the fastest growth, outpacing all other workforms.

The result of these economic changes is a population and society which must change just as rapidly to keep pace. Statistics indicate that the average high school student graduating today will have four careers—not just jobs, but separate careers—during his lifetime. The implications of this fact for our education system are endless.

A second trend apparent in our society is that it is changing demographically. The often discussed baby-boom generation—those born between 1946 and 1964—is coming of age. The last are finishing college right now. Soon they will face the training, retraining, and skill improvement needs that all American society is facing.

Overall, our population is getting older. The number of 18-year-olds will decline throughout the 1980's, leveling off around 1991 at about 73 percent of the number the age group represented in 1979. As far as traditional higher education is concerned, the simple facts are that the 18 to 22 age bracket will contain only 17 million people while those age 22 and above will number 133 million.

Finally, and a third trend, America is changing as a society. Socially, the effects of divorce, single parenthood, and women outside the home are extensive. Only 7 percent of today's families fit the traditional American concept of working father, housewife, and two children. More than one-third of the children born in the 1970's will spend their life living with a single parent. Additionally, more than one-third of the couples first married in the 1970's will have divorced. Our society is coming to be composed more and more of new, unique family units, and we face equally unique problems resulting from the breakup of the traditional family unit.

Of parallel significance is the expanded role women are playing outside the traditional homemaking setting. In many respects the past 15 years might correctly be characterized as the era of the working woman. Between 1972 and 1979, the number of self-employed women increased 43 percent, five times the rate for men. There are now 3 million women business owners in the United States, and women now represent nearly half the work force.

The significance of these changes on education generally, and higher education specifically, is far reaching. Social forecaster John Naisbitt, in his book "Megatrends," states:

"In education we are moving from the short-term considerations of completing our training at the end of high school or college to lifelong education and training."

In the future our education system will be asked not only to supply the traditional learning process, but training, retraining, and skill improvement for Americans of all ages. Formal education simply cannot and will not stop after a high school or college degree is granted.

The facts are we are not just moving into the realm of lifelong education; we are there. The National Center for Education Statistics predicts that the traditional age student population will decrease by 25 percent during the period 1979 to 1990. Simultaneously, the nontraditional student population will increase by 25 percent. Simple demographics, let alone economic and social changes, dictate that our student population will grow older.

The trend toward an older student population affects all of higher education. While it was expected that trek of older persons to college campuses would benefit 2-year schools, community colleges and even State schools most, more expensive private institutions, if they prepare correctly, can also see the impact of the nontraditional student. President Derek Bok of Harvard University for example, stated in his 1982 commencement address:

"We now enroll about 15,000 students in traditional degree-granting programs. That figure is essentially unchanged from what it was ten years ago. But we currently teach more than 30,000 additional students in a variety of nontraditional ways. And that figure has almost doubled in the last decade."

And the potential benefit of these additional students, even in simple monetary terms, has yet to be accurately calculated. Yet one gets a picture of their potential magnitude from an American Society for Training and Development estimate that business and industry now spend $30 billion a year for the education and training of its employees. How much of this can be taken over by the higher education community is anyone's guess.

AT&T alone spends $1.1 billion a year on developing courses, paying instructors, for facilities, travel, and living expenses of participating employees. On any given day, 30,500 of AT&T's employees are in these corporate sponsored classes. Clearly, the need and market exist; higher education needs to respond.

Our current law, however, does not reflect these facts and trends. The Higher Education Act focuses upon a student body comprised of younger traditional students. Its title I, continuing education, is unfocused to the extent that it has not received funding in four years. Its title IV student assistance programs are biased against older students both in terms of pure eligibility and the means test used to determine amounts of grants and loans.

Again I stress that a major priority of our reauthorization process must be to bring the Higher Education Act up to date with these current facts and trends. Older students are and will continue to play a larger role in higher education, and our Federal education law must first recognize them and then accordingly serve their needs while treating them fairly.

We must first recognize that nontraditional students needs are different than other students. Thomas Hudleston and Mary Hendry report in their analysis of adult students that:

Among the major barriers that prohibit adults from returning to college are money, time, information, and personal fear of failure.

Simply put, adult students' attitudes and values are different. In many cases they have a career, children, car and home payments.

Understandably so, these students are different than their younger fellow students. Today, 42 percent of our students attend school part time—six credits or less. Over the past 10 years there has been a 52 percent growth in this group with older students comprising a large portion of that growth. Relatedly, 76 percent of our adult students attend part time.

The college board suggests that non-traditional students exhibit a number of concerns different than traditional students. Financially, their concerns are generally more extensive and immediate. They also have limited resources because of family responsibilities. They also have limited time availability because they are full-time workers and parents. But they also tend to be self-directed, responsible, and motivated. Accordingly, programs, curriculum, and teaching must be different to meet their needs. Finally, older students face personal considerations substantially different than their younger colleagues: transportation, day care for children, and even a convenient and quiet place to study.

Clearly, a reformation of Federal law is warranted to respond to these special needs. Our response should be focused in two complementing areas: First, institutional development and improvement through a new title I, and, second, student financial aid opportunities through revisions of our title IV programs.

In March, I introduced H.R. 1473, which would provide a comprehensive revision of title I of the Higher Education Act by focusing it on improved services to nontraditional students through institutional development.

An analysis of the nontraditional student in higher education made it clear that title I had to be reformed to focus on the nontraditional student with emphasis in three areas: on-campus programs, off-campus development, and research. This new legislation responds to this threefold need by establishing three competitive grants to individual or groups of institutions for a 3-year period.

Initial examination of the needs of the nontraditional student reveals that our colleges and universities must begin by revising the programs and services they currently offer on campus. Clearly, one of the most significant barriers to matriculation for the adult learner is the structural organization of a postsecondary institution. American schools need to undertake both short-term changes in their programming, curriculum, and scheduling and the long-term planning necessary to integrate adult learners into their every day campus life and their general mission.

Part A of the revised title I would establish a 3-year maximum grant of $200,000 to expand and improve a variety of on-campus services for adult learners. Included are collaborative efforts by the institution to develop curriculum and education programs responsive to current employment and economic conditions; revised academic programs more available to nontraditional students at convenient times and locations; child care facilities; remedial instruction programs; and training for faculty and staff, among others.

The second grant would focus on the development and upgrading of off-campus educational programs. In many cases, adult learners encounter barriers which prevent them from attending classes on campus. At the same time, modern technology is an effective resource which can be used to make the resources of higher education more readily available. This $200,000 maximum grant can be used for the development and use of such technology for off-campus programs as well as other unique outreach systems and curricula. Institutions, however, would be permitted only to use 20 percent of their grant for the acquisition or purchase of equipment.

Finally, research into the many facets of nontraditional education naturally lags behind our knowledge in traditional education methods. As such, a third grant is established to conduct institutional research on the special problems and needs of adult learners, development of outreach methods to attract and mainstream adult learners, and training programs to enhance the effectiveness of faculty to teach adult learners, among others.

In all three cases, institutions receiving grants would be required to pick up these programs once the Federal grant was completed. In order to encourage consortial arrangements, a higher maximum grant of $300,000 for all three parts is established for two or more schools applying together.

This combination of programs will establish Federal leadership and a small incentive for the higher education community to broadly increase its services for this growing sector of our Nation's student body. This is a population group whose need for specific educational services is a growing product of our changing American society.

As we change as a whole, the individual must also change, adapt, and grow. Education's role in this process is undeniable and essential. Today, more than ever, the words of John Dewey, years ago, hold sage forecast about our society and education's place in it:

Education is a social process.
Education is growth.
Education is not preparation for life; education is life itself.

Mr. FORD. The first panel will consist of Dr. John Snider, assistant vice president for continuing education, Colorado State University; Dr. Philip Phelon, president of Cumberland Community College who is appearing at the request of our colleague, Marge Roukema of New Jersey, and I would like to read into the record a note that was handed me this morning addressed to me as the chairman here.

Bill, I appreciate your scheduling Dr. Philip Phelon of Cumberland Community College to appear before the subcommittee tomorrow. I regret to inform you that I will be unable to attend the hearing. As you know, the full committee is scheduled to consider single employer pension insurance legislation next week and minority members will be meeting to discuss this at the same time as your hearing today. Again, thank you for scheduling Dr. Phelon, and I look forward to reviewing his testimony. Sincerely, Marge Roukema, Member of Congress.

The third person is Dr. Morris T. Keeton, chairman of the Commission on Higher Education and the Adult Learner.

Without objection, the prepared statements of each of the participants in this panel will be included in the record in full.

You may proceed to add to, to supplement, to summarize, or comment on them in any way you feel would be most profitable at this point in the record, and we will start any way you prefer.

I guess Dr. Snider first.

STATEMENT OF DR. JOHN SNIDER, ASSISTANT VICE PRESIDENT FOR CONTINUING EDUCATION, COLORADO STATE UNIVERSITY

Mr. SNIDER. Chairman Ford, distinguished members of the subcommittee, I am John C. Snider, assistant academic vice president for continuing education at Colorado State University. I come before you this morning as president of the National University Continuing Education Association, NUCEA. NUCEA is a national, nonprofit association representing some 350 member colleges and universities and over 1,000 continuing education professionals serving millions of adult, part-time students nationwide. Since its creation in 1915, NUCEA has provided leadership in the field of continuing education and university extension services.

I would like to commend you, Mr. Chairman, and your distinguished colleagues, for your efforts on behalf of nontraditional students and for allowing me to share NUCEA's goals pertaining to the reauthorization of title I of the Higher Education Act of 1965 as amended.

I also wish to commend Congressman Gunderson on his introduction of H.R. 1473 on March 7, 1985. NUCEA believes this legislation addresses the broad goals of the continuing education community.

NUCEA has been committed to title I since its enactment. NUCEA member institutions were involved in the creation of the original version of title I, included in the Higher Education Act of 1965. In addition, a member of the NUCEA staff chaired the American Council on Education's Title I Task Force, and it was that task force which, on behalf of the higher education community, submitted detailed recommendations to the subcommittee on April 30, 1985.

With your permission, Mr. Chairman, I would like to outline briefly two NUCEA priorities with respect to title I and then proceed to answer any questions that you might have.

Mr. Chairman, the institutions of higher education are witnessing a transition in the overall composition of today's college students. When the Higher Education Act was first enacted in 1965, it sought to serve both national and student needs. Twenty years ago, college students were mostly 18 to 22 years old and of financially dependent status. Today's college students are older on average than their fellow classmates. Often they attend school part time. For example, in 1984 part-time students accounted for 41 percent of the higher education enrollments. Students over the age of 25 represented over 30 percent of all college enrollments. Moreover, these "older students" are expected to account for a growing proportion of American college and university enrollments in the years ahead.

Frequently these older part-time students must support dependents of their own. They often come from families in which their generation is the first to seek college diplomas. For the most part, these students see higher education as an opportunity to gain the education they perceive as so vital to their own long-term economic security. They recognize, from personal experience in many cases, that the job world is changing; that they cannot expect to make their first occupation a lifetime career.

College enrollment among minorities represents a special cause for concern, not only for the higher education community, but for our Nation as a whole. By the year 2000, almost one-third of the available college-age youth will be minorities. While greater numbers of minority students are enrolling in postsecondary institutions, the percentage of the overall minority population attending these institutions is actually decreasing. Thus there are more potential minority students than ever before who will not receive the education necessary to succeed in today's rapidly changing workplace. Increasing numbers of these minorities find themselves at an educational disadvantage. Frequently they receive little encouragement to pursue postsecondary studies. And with very little support and few resources, many first-generation minority college-age potential students abandon pursuit of a college degree before they start. This represents a critical loss for America's future work force.

At issue here, Mr. Chairman, is the future productivity of the American work force. Ninety percent of those who will constitute the work force of 1990 are already in today's work force Displaced employees from declining traditional industries need to be reeducated and retrained. Potential new work force entrants need to acquire the skills which will enable them to realize their productive potential.

In our rapidly changing world, a highly skilled work force is the prerequisite for a vital and secure economy. Keeping pace with accelerating changes in the work place requires lifelong learning. Title I represents an important vehicle that could help to foster and sustain lifelong learning through higher education institutions.

NUCEA has two priorities for the reauthorization of title I. NUCEA supports:

One. The provision of direct grants to postsecondary institutions to develop and strengthen adult learning and continuing education programs to help meet the needs of the adult learner; and

Two. The development of new educational delivery systems to better serve off-campus students and those unable to attend scheduled classes.

First, NUCEA seeks to establish a grant program to be administered by the Secretary of Education, which would promote the expansion and improvement of continuing education programs at postsecondary institutions. The broad authority for Federal support of continuing postsecondary education established in 1980 has never been funded by Congress. NUCEA supports a revision of the title to provide a realistic, minimal Federal program to stimulate new adult learning services.

More than 21 million Americans are currently participating in some type of adult education, which makes this the fastest growing sector in all of education. NUCEA member institutions alone devote extensive resources to this constituency, and typically receive little or no budgetary support from their own institutions. To address the emerging needs of diverse adult student constituencies more effectively, funds are required to try new ideas and new student services. Without outside support, institutions cannot easily find the risk capital necessary to experiment with innovative ideas.

Second, NUCEA seeks in the reauthorization of title I a recognition of the importance of new educational delivery systems to continuing higher education. Technology in and outside of the classroom is no longer a theory, but a reality. The emphasis on new learning technology is central to ensuring equal access to higher education by all segments of the population.

When I refer to education delivery systems, I mean the diverse ways in which knowledge is communicated or made available to learners. Today, educational delivery systems include both audio and video telecommunications technologies such as radio, audiotapes, telephone and teleconferencing, videotapes, open broadcast television, cable television, instructional television fixed services, ITFS, satellite television, and a variety of interactive telecommunications.

Continuing education programs cannot be characterized by one approach because of the diverse educational needs and background of today's continuing education students.

For instance, at Colorado State University, my home institution, we have been offering graduate engineering education via television since 1967. However, this program, known as State University

Resources in Graduate Education—SURGE—requires a significant capital investment for development and production costs alone.

The International University Consortium—IUC—based at the University of Maryland, furnishes telecourses to more than 24 member institutions across the country. In 1983, student enrollment in the IUC program increased 57 percent over the year before.

At Kansas State University, an audio/teleconferencing system delivers a program to high school science teachers, designed to enhance their knowledge of new discoveries in the field and, in turn, help make them better teachers.

Depending upon the audience and available resources, one or another medium may be preferable. Whereas satellite might be appropriate for delivering engineering courses to professionals on the job, television may be the best medium for the single head of household with two small children, or for teaching students in remote areas.

This Nation's future economic vitality will depend on the quality of its work force. To meet the challenges of an increasingly competitive international marketplace, America must be prepared to reinvest in its human capital resources. Colleges and universities should be encouraged to help educate and train those already in the work force and at the workplace. Effective ways to do this utilize both newly emerging educational delivery systems and delivery systems already in existence.

As will the grant program strengthen and promote continuing education programs at the postsecondary level a Federal Government initiative will be critical to the timely and widespread use of educational delivery systems. These delivery systems offer the means to achieving equal access and participation for nontraditional learners.

NUCEA's two priorities for the reauthorization of title I represent ways in which the rapidly changing student population can be served through postsecondary institutions. The important task for reauthorization of title I is to grapple with the educational and economic consequences of meeting the needs of the constituencies which will constitute the college student population of the future. Revising title I will go a long way toward ensuring a fundable continuing education title and the access of all segments of the population to higher education.

NUCEA welcomes the continuing opportunity to work with the members and staff of this subcommittee and with leaders of the higher education community to help meet the needs of nontraditional students.

Mr. Chairman, on behalf of NUCEA, I thank you for the opportunity to testify before you here this morning.

Mr. FORD. We will go on. The Members are going to respond to this vote. I have announced before my protest at the nonsense of wasting the taxpayers' money and our time by taking a vote that everybody knows the conclusion of in advance on whether or not yesterday's journal in the House should be approved, something I just refuse to do. So I will continue and they will come back as they finish.

STATEMENT OF DR. MORRIS T. KEETON, CHAIRMAN, COMMISSION ON HIGHER EDUCATION AND THE ADULT LEARNER

Mr. KEETON. Mr. Chairman and members of the subcommittee. I am being joined by Michael Goldstein, a member of the commission, and counsel for the commission, who is with me here.

I would also like to request your permission to put in the record the document of the Commission on Higher Education and the Adult Learner called "Adult Learners, Key to the Nation's Future," and a booklet on this commission which has been supplied to your staff.

Mr. FORD. Without objection, it is so ordered.

[The information follows:]

ADULT LEARNERS:
Key to the Nation's Future

The Commission on Higher Education and the Adult Learner
10598 Marble Faun Court
Columbia, Maryland 21044

November, 1984

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Executive Summary

The Commission on Higher Education and the Adult Learner, composed of 40 leaders from education, business, labor, and the community, has outlined the United States' need for a new emphasis on adult learning and has suggested specific programs to meet that need. Building on numerous other studies and reports, the Commission points out that the United States is in an increasingly competitive economic struggle, at a time when there are fewer new workers each year and when technology is rapidly changing every facet of the economy. They argue that our major resource is *human capital* and that this poses a new challenge to the nations' providers of education and training for adults, a challenge that must be met without diminishing national commitment to the education of its youth.

For reasons of national interest embedded in the economic, political, and social determinants of the quality of life, the fostering of learning by adults is an immediate and compelling national need, a need requiring a lucid and forthright statement of national policy and immediate attention by the nation's colleges and universities.

The Commission urges specific action by the federal government and by the major participants in providing education and training to adults, action directed at meeting five major challenges:

- developing or renewing employability for the unemployed;
- maintaining and enhancing occupational skills in the face of technological change;
- eliminating adult illiteracy;
- providing equal access to education for all adults; and
- developing knowledgeable citizens in an information-technological society.

There are significant impediments to meeting these challenges. They include institutional barriers, particularly within many senior colleges and universities that do not see serving adult learners as within their mission and that resist making the accommodations necessary to serve adults well. Inadequate funding for institutions and individuals is another impediment, as is the lack of awareness among adults of the opportunities open to them.

Through its Institutional Self-Assessment Project, the Commission is seeking to stimulate change within the colleges and universities so that adults will be served more effectively and collaboration with sponsors and other providers will expand the learning opportunities for adults. The Commission is currently examining options open to the states in strengthening programs and services for adult learners. And the Commission is recommending broad federal action to include:

- Stimulating innovation in the delivery of adult learning services through institutional grants;
- Enhancing the capacity of institutions to deliver services to adult learners through multi-year challenge grants with a declining federal share;
- Providing financial assistance to needy adult learners;
- Encouraging adult learning among the unemployed through a voucher plan;
- Eliminating present disincentives to adult learning, principally within the tax structure; and
- Bridging the information gap, in partnership with the states, through comprehensive adult learning information and counseling services.

The Commission holds that sound long-term solutions rest on collaboration among the sectors and a fair sharing of costs among the beneficiaries of adult learning. To these ends, the Commission also promotes:

- regional conferences of labor, business, government, and higher education to address regional adult education issues;
- increased intersector collaboration among national labor unions, business associations, corporate executives, elected officials, trainers and continuing educators;
- new national, regional, and local communications networks among those addressing these national needs; and
- additional proposals for funding adult learner services at state and local levels.

I. Introduction

The Commission on Higher Education and the Adult Learner was established by the American Council on Education in 1981 to recommend public policy and organizational and institutional arrangements that would provide new and increased opportunities for adult learners. Now co-sponsored by ACE, the Council for the Advancement of Experiential Learning (CAEL) and The University of Maryland University College, the Commission has three main agenda:

- developing public policies, both state and federal, that address the needs of the nation for adult learning;
- helping institutions of higher education to clarify their roles and to serve adult learners better; and
- stimulating effective cooperation and division of labor among associations that serve adult learners.

During the past three years, the Commission has conducted nationwide hearings and held numerous meetings with leaders from education, business, labor, and the community. Based on these deliberations and numerous other studies and reports, it is the conviction of the Commission that national attention must be focused on adult learning as a major resource in solving the nation's economic and social dilemmas. The Commission believes that the ongoing pursuit of learning by adults throughout their years of competence is no longer a luxury for this society. It is a necessity. It is essential to three critical public needs: economic strength through increased productivity and international competitiveness; social equity in the interest of political stability; and enhancement of the quality of life for all citizens.

This paper calls for a new nationwide emphasis on adult learning and suggests specific programs to meet those critical needs. It cites five major tasks that have direct bearing on current economic and political conditions, as part of a broad array that includes liberal learning, and other educational needs with long-term implications for the quality of life. These priorities pose an immediate challenge to the nation's resources for learning.

II. The Case for Action

The United States is in an increasingly competitive economic struggle, at a time when there are fewer new workers each year and when technology is rapidly changing every facet of the economy. Anthony Patrick Carnevale reports that "between 1963 and 1975, the United States' share of the world's skilled workers has fallen from 29% to 26%. Internationally, the United States has dropped from second to seventh place in the level of skilled workers."[1] Numerous other studies and reports have underlined our increasingly critical position as we strive for technological and economic health. As this scenario unfolds, the nation's population is getting increasingly older. Hodgkinson estimates that workers currently in the work force will constitute over 90% of the work force in 1990.[2] In such a setting, human resources become the nation's most precious resource. In fact, over the past 50 years, the dominant factor accounting for growth in national income has been *human resources*—not capital or land—and this trend is projected to continue through 1990.[3] We must urgently and carefully develop these human resources to their fullest.

These trends and the demographic shift to an increasingly adult society provide a new challenge to the nation's resources for learning, a challenge that must be met without diminishing national commitment to the education of its youth. As we move through the 1980's and 1990's, we face five major tasks in developing our human resources fully:

- developing or renewing employability for the unemployed;
- maintaining and enhancing occupational skills in the face of technological change;
- eliminating adult illiteracy;
- providing equal access to education for all adults; and
- developing knowledgeable citizens in an information-technological society.

Recurrent Structural Unemployment: Carnevale estimates that during the 1980's about 1% of the work force, more than 1,000,000 workers will become victims of structural unemployment. They will lose their jobs as a result of technological change, shifting prices, new products, and foreign competition.[4] We know from the experience of auto workers that 15 to 20% of these workers will never return to former jobs nor find work using their current skills. A major educational effort is required to maintain employability of persons displaced from obsolete occupations. Yet many current programs do not work well enough. Neither institutions nor students are adequately prepared for the task. We need to develop a new sophisticated combination of educational services: assessment, guidance, instruction, and placement.

Maintaining Occupational Skills: The United States urgently needs a more competent work force: as Carnevale puts it, "smarter workers working smarter." Yet the problem will not be solved by a one-time catch-up in worker competence, for the occupational context continues to change rapidly. For example, the private domestic market for robots is expected to quadruple in the next three years, and computer-assisted design, manufacturing, and testing sales in 1984 are predicted to be more than 10 times those of 1980.[5]

The nation needs what Ernest Lynton calls "occupational maintenance" to enable employed people, from the most sophisticated professional to the so-called "unskilled", to remain effective in a constantly changing occupational context. American firms currently spend an average of only $300 per employee annually on worker training while spending $3300 per employee on capital investment.[6] Clearly, we must redirect our investment and effort in order to raise the quality of the American work force.

Adult Illiteracy: Although 99% of U.S. citizens over age 13 can read and write in some language, illiteracy is a major problem. The illiterate 1% comes to more than 1,500,000 adult citizens who cannot read and write *any* language. Those numbers are further swelled by the "functional illiterates", those who cannot read and write well enough to function in our society. This group has been estimated to range from 25,000,000 to 45,000,000 people—the equivalent of the combined populations of New York, New Jersey, Pennsylvania, Delaware, and Maryland. In a democracy of growing complexity and sophistication, functional illiteracy cannot be ignored. Essential re-education, special efforts to enable new workers to enter the work force, and effective citizenship rest on basic literacy skills.

Equal Access: America cannot afford the injustice of an educational underclass, less schooled than either their abilities warrant or equity requires, and ill-equipped to continue their learning. Nevertheless, barriers to equal educational opportunity remain. Unequal access has devastating results. For example, under existing federal student financial aid policies, a single, working mother with a college-aged daughter can obtain financial aid for her daughter to attend college full time but cannot receive any aid for herself to take one college course to improve her occupational skills. Likewise, the unemployment rate in October 1980 for high school dropouts of that year was nearly 70% higher than that for graduates, and within that group of dropouts, the unemployment rate for blacks was more than twice that for whites.

Citizenship in an Information-Technological Society: America's rapid shift from an industrial to an information-technological society whose emphasis is no longer products but services has a profound effect on contemporary citizenship. John Strange notes that with computer capability goes power: access to information and education as well as success, better income, and other rewards.[7] Not only must the employed and the employable be re-educated to the relevant technologies, but citizens in general must be enabled to function effectively in an increasingly technical environment. Contemporary citizenship calls for a new level of sophistication: comprehension and competence in the technologies as well as the ability to evaluate propaganda and political argumentation and the disposition and ability to participate actively in the democratic process. Significant efforts are required to reduce the gaps between the requisite understanding and the current state of adult knowledge and skills in technology of their society and in citizenship responsibilities.

Competence as the Goal of Adult Education: We cannot measure our success in meeting these five challenges with semester hours or grade point averages. Adults measure their success in terms of their competences. Increasingly, research and theory on education and on occupational success are defining the outcomes that must be addressed in programs for adult learning. The competencies and characteristics required for literacy, employability, occupational success and effective citizenship are examined in another Commission paper.[8] It is critical to note, however, that we will meet this need for adult learning in ways that are different from those we use to educate our youth.

III. Impediments to Meeting the Need

There are significant impediments to meeting the nation's need for adult learning; chief among them are the following.

Institutional Barriers: Senior colleges and universities too frequently do not envision themselves as providers of educational services to adults. They place high priority on traditional missions: research, teaching to conventional clienteles, and public service in the form of agricultural extension, technology transfer, consultation, cultural events, etc. Two kinds of exceptions are worth noting, however: First, a large group of universities have significant units dedicated to continuing education. But most often those units have limited curricular scope and restricted scheduling and degree-granting authority, and are handicapped by their self-supporting financial status. Second, a growing number of small colleges are actively seeking to serve the needs of adult learners, often motivated in part, at least, by critical declines in their enrollment of traditional students. And, of course, from the beginning the two-year community colleges have seen adult learners as a major clientele and provide useful models for senior institutions to examine, if they are to serve adult learners well.

But there is significant resistance within many four-year colleges and universities to making the accommodation necessary to serve adult learners with full and equal effectiveness. This is attested to by representatives of business, industry, and other organizations who have sought to negotiate with universities and colleges for undergraduate and graduate level educational programs. And state higher education officials note the lack of pressure from public universities for programs, services and funding to meet adult learner needs. In spite of the recent evidence of change on many campuses, higher education institutions themselves remain a major impediment to addressing the nation's needs for resources for adult learning. They appear unready to recognize the magnitude of the need and to confront the requisite changes.

These changes are not insignificant. Much about postsecondary education is inappropriate for adult learners; within the present system, there is excessive standardization, insufficient individualization, needless repetition, and inadequate recognition of prior learning. State funding formulas are too frequently obsolete, ignoring part-time students and those in continuing education units. Rigidity of schedules, opposition to part-time faculty and off-campus locations, and anxiety about new partnerships hamper collaboration with business, industry and others with educational needs. What appears to be a golden opportunity for cooperation among education providers is very slow in coming; the higher education establishment must change if it is to be an effective partner.

Inadequate Funding: Even institutions that wish to serve adults have difficulty adapting to their needs because few funds are available for design or redesign of programs and services for adults that must differ in nature and scope from those for youth. Ineptly designed and managed instruction and support services can spell disappointment for the students and the institution.[9] Almost no funds are available to pay tuition for the unemployed or for the employed who have no access to employer-sponsored tuition-assistance plans. Most current student financial aid programs are restricted to accredited institutions and require at least half-time enrollment, more than most working adults can manage. Funds for other kinds of postsecondary training are almost non-existent, as are funds for living expenses for the unemployed during retraining. Until individuals and institutions have more and broader support from federal and state governments, progress will be slow.

Lack of Awareness: Adults are often unaware of the opportunities open to them, do not want to use them, or think that education is only for the young. For example, fewer than 4% of employees eligible for employer-sponsored tuition assistance use those benefits. And the public in general is only gradually becoming aware of the need for ongoing education. The 1983 report of the National Commission on Excellence in Education speaks only of remedies in education for youth, reinforcing the myth that education is only for the young and the companion myth that adults have completed their schooling. Yet adults' education needs are at least as great as those of the young and constitute an equivalent obligation for policy and societal action. Clearly, a major effort is required to raise the level of awareness among education providers, government, prospective adult learners, and the general public.

IV. Components of the Solution

A Public Commitment to Adult Learning: The need for adult learning—and the impediments to meeting that need—touch many elements of our society. The problem is complicated and calls for a new degree of collaboration among government, education providers, employers, and learners. Such collaboration must include a fair sharing of the costs among all parties that stand to benefit.

Paradoxically, at the same time that the nation's human capital is being underutilized, its colleges and universities are losing clientele and becoming underused. Collegiate institutions could effectively join forces with the many other education providers — the military services, corporate education and training programs, training and telecommunications industries, and so on — to address the nations' education needs.

The Commission on Higher Education and the Adult Learner solicits the help of others who will join the effort: to focus national attention on adult learning as a major resource in solving the nation's economic and social dilemmas and, thereby, to inspire a new surge of hope and effort toward realizing our national potential.

We need a new policy in the federal government, in the 50 states, and in the corporations and educational institutions: that adults be enabled to continue learning — regardless of their financial resources, ethnic and socio-economic status, age, and sex — long enough and effectively enough to be competent in adult roles and to contribute productively to American life.

To achieve this goal, means must be adopted that do not diminish efforts on behalf of younger learners — they are the adults of tomorrow and no good will be served by solving today's crisis in ways that exacerbate tomorrow's problems.

A Federal Program for Adult Learners: The need for adult learning is national in scope; it must be addressed, at least in part, at the national level. Commitment backed by appropriate federal funding is an essential component of the solution. A minimal federal program would incorporate efforts to stimulate innovative adult learning services and programs, to ensure institutionalization of effective programs and services, to meet a variety of individual needs for financial assistance in continuing learning, to foster information and counseling services for adults, and to promote third party investment in the ongoing education of adults. The Commission's proposal for such a program appears as Appendix A.

The Role of the States: The states have a crucial role in the orientation of higher education toward serving adult learners. Nearly 80% of college and university enrollments are in publicly funded institutions. They constitute the major postsecondary resource in education in metropolitan areas where the need is greatest. But there is great variation among the states in the extent of comprehensive planning and initiatives for lifelong learning. In only 22 of the 50 states is the postsecondary education commission also an institutional governing board; in the majority of states they are coordinating boards with restricted authority. But, as K. Patricia Cross has noted,

> no matter what the level of participation or extent of planning and goal setting, states are being confronted with issues related to the increased presence of adults as learners. These issues can be grouped under four overarching concerns: providers, access, quality assurance, and economic revitalization.[10]

In the current year, the Commission is undertaking an examination of options open to the states in addressing these concerns and strengthening programs and services for adult learners.

Institutional Change: The expanding needs for adult learning cannot be met with full effectiveness in the absence of changes within many colleges and universities. And even the best providers recognize room for improvement. In the belief that the most effective and lasting changes come from within institutions, the Commission has sought means to stimulate colleges and universities to reorient themselves through reviews of institutional mission and evaluation of performance. In 1984, the Commission published *Postsecondary Education Institutions and the Adult Learner: A Self-Study Assessment and Planning Guide*. It is designed to ascertain the current effectiveness of a total institution or of a unit within an institution in serving adult learners; it is also effective in assessing institutional readiness to serve an adult clientele. Through some of its Regional Conferences, the Commission also addresses issues of institutional change. A fuller description of the Institutional Self-Assessment Project appears in Appendix B.

Collaboration and Cost-Sharing Among the Sectors: Federal and state programs cannot by themselves meet the nation's need for adult learning. Nor can any single sector of the American economy meet the challenge single-handedly. We need inventive collaboration among all—education, business, labor, and government. In preparing its proposals, the Commission stresses the importance of such collaboration and strives for recommendations that preserve a division of labor among the diverse providers of education, that acknowledge the distinctions among institutions with different missions and responsibilities, and that provide for a fair sharing of costs among the beneficiaries of adult learning.

These proposals assume active cooperation among many providers of education in a variety of areas:

- employers and the work place;
- unions and the union hall;
- public and proprietary schools, colleges and universities and their classrooms, shops, and laboratories;
- the military and other governmental agencies at their sites;
- libraries and museums; and
- the telecommunications and computer systems, in the home and elsewhere.

We must build upon the models of cooperation that already operate well: work-study programs, university instructional television at the workplace, and faculty-designed computer-aided instruction. Yet we must also be careful to preserve the distinctions among providers. High quality educational service is needed from many different kinds of institutions. No single set of criteria will be adequate in judging the multiple efforts from diverse sources that are required to improve and expand adult learning.

We must fairly share the cost of this effort, taking into account public priorities, the national interest, and personal and corporate advantage. As we do so, we should balance direct grants and outright subsidies with new incentives to individual and third party investment in education. We must take full advantage of all the possible sources of funding—personal, state and federal, corporate, labor union, and philanthropic. We must distribute limited resources among a variety of learners:

- new and displaced workers;
- the economically and socially disadvantaged;
- the linguistically and functionally illiterate;
- employed people maintaining occupational currency;
- those being trained in the national interest; and
- avocational learners.

Given this diversity of learners, it is perhaps more realistic to establish priorities for the kinds of education needed than for categories of learners. In any event, we must establish a framework of cost sharing that balances considerations of efficiency, fairness, and benefit so as to make the most effective use of the effort to meet national priorities for adult learning.

The Commission also seeks to stimulate collaborative activities beyond those outlined above in the following ways:

- regional conferences of labor, business, government, and higher education to address regional adult educational issues;
- increased intersector collaboration among national labor unions; business associations, corporate executives, elected officials, trainers, and continuing educators;
- new national, regional, and local communications networks among those addressing these national needs; and
- additional proposals for funding adult learner services at state and local levels.

Appendix A

A PROGRAM FOR FEDERAL SUPPORT

The Commission endorses actions that stimulate new and more effective adult learning programs, that ensure their replication and that assure access regardless of the individuals' economic status. To accomplish these ends, we propose a multi-faceted approach consisting of support of research and innovation; strengthening of institutional capacity; elimination of discrimination against needy adult learners in access to student financial assistance; revisions in tax policy to encourage rather than discourage productive use of learning resources by the nation's work force; and creation of the information, counseling and guidance services that are necessary to make access and equity a reality.

STIMULATION OF INNOVATION IN THE DELIVERY OF ADULT LEARNING SERVICES

We propose a separate authorization to the Fund for the Improvement of Postsecondary Education (FIPSE) to fund experimentation and innovation in adult learning services and delivery systems and to disseminate the fruits of successful efforts. Such an expenditure is consistent with the federal commitment to foster research and experimentation that improves the quality and availability of postsecondary education, and FIPSE already has a statutory mandate clearly in line with such an effort. We propose an additional and separate authorization for this purpose so as not to diminish the other essential activities carried out by this fine agency.

Funds appropriated for this purpose should be targeted towards projects that seek to develop new capabilities for postsecondary education to serve adult learners, such as models which:

- improve the delivery of instructional services for adult learners, particularly those which overcome the barriers of location and time;
- adapt for postsecondary use education and training methods developed in other sectors;
- integrate work-related instruction with general learning;
- enhance cooperation among business, labor and higher education;
- improve faculty competence in teaching adult learners; and
- improve the delivery and availability of noninstructional services for adult learners, particularly in the areas of information, guidance, and counseling.

We propose that innovation grants be available to the same broad spectrum of applicants as is the case for the FIPSE Comprehensive Grant program.

ENHANCING THE CAPACITY OF INSTITUTIONS TO DELIVER SERVICES TO ADULT LEARNERS

We propose a new program of multi-year challenge grants to stimulate the institutionalization of effective adult learning programs and services. Institutions willing to make a substantial commitment to the development and continued support of a comprehensive adult learning effort would be eligible to receive five-year, nonrenewable challenge grants, with federal support to be steadily replaced and enhanced over that period by locally derived resources. We propose that to qualify for an Adult Learning Challenge Grant, an institution will have to demonstrate not only its own commitment to serving adult learners but also the tangible support of the private sector, labor, state and local government and other nonprofit organizations as active participants in its efforts. Applicant institutions would be required to show how they would restructure their academic and support services to accommodate the needs of adult learners, and how their effort would serve a definable constituency.

We propose that the Challenge Grants be based on the number of adult learners to be served with a minimum grant of $100,000. Grants would be awarded on a basis that would ensure geographic diversity and recognize the differing needs and contributions of public and independent institutions and those located in urban and rural settings.

FINANCIAL ASSISTANCE FOR ADULT LEARNERS

The Commission recognizes that the availability of programs that serve adult learners is not sufficient if those who should take advantage of these offerings are excluded due to their financial condition. To achieve equity in serving the postsecondary education needs of adults, we propose a three-tiered approach to provide financial assistance to the truly needy adult learner.

First, we propose that higher education, business and labor join together to demand the full implementation of present provisions of law enacted over the past several years to reduce inequities visited upon adult learners in their access to student financial assistance. Arguing for new sources of support is without meaning if the administering agen-

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cies, and to some extent the institutions themselves, are reluctant to make use of even the limited aid already afforded.

Second, we propose that grant and loan resources be extended to qualified needy adult learners regardless of the intensity of their enrollment, so long as they are enrolled in a postsecondary program leading to a degree or certificate or providing training for a recognized occupation. We propose the creation of a program of direct grants for truly needy adult learners to enable them to enroll in formal postsecondary programs that are intended to enable them to maintain employability, advance within their field or enter or re-enter the job market.

Third, we propose that a comprehensive study be undertaken to determine the resources and programmatic requirements necessary to generally afford needy adult learners access to the education and training they require.

STIMULATION OF ADULT LEARNING AMONG THE UNEMPLOYED

We propose that those who are receiving unemployment compensation benefits be afforded the opportunity to trade in a portion of those benefits for postsecondary education services, with each dollar traded in matched at least one-for-one with additional resources. We further propose that the use of this benefit not jeopardize an individual's continued eligibility for unemployment compensation during the defined duration of the postsecondary program of instruction.

ELIMINATING DISINCENTIVES TO ADULT LEARNING

We propose amending the federal Tax Code to eliminate provisions that penalize those who engage in adult learning activities and discourage employers from supporting such services.

We propose extending the deductibility of individual educational expenses except for instruction that is purely recreational. We believe that it is important to the economic health, social welfare and security of the nation to encourage persons to advance their abilities and careers so as to maintain competence in their existing jobs, particularly as we enter an era when technological obsolescence is likely to affect entire industries as well as particular skills.

We also propose consideration of tax provisions that would encourage corporate investment in postsecondary education, particularly for programs that are designed to improve the competencies of the work force and that strengthen the ability of postsecondary institutions to provide effective adult learning programs. We propose that present programs that afford tax preference for the donation of scientific equipment be expanded to encompass equipment and facilities used for adult learning purposes.

We propose further study of incentives for individual saving to defray the cost of future learning needs, including consideration of the creation of an Education Security Fund and tax-favored Education Maintenance Accounts.

BRIDGING THE INFORMATION GAP

We recognize that the most aggressive investment of public funds in improving the ability of institutions to deliver adult learning services, and in affording individuals the economic wherewithal to access such services will not succeed if this nation does not forcefully address the need for information and support services to enable persons to make intelligent decisions. The lack of comprehensive adult learning information, guidance and counseling services is a national disgrace, and we propose a major federal initiative be carried out in partnership with the states, to remedy this failure. We propose a federal grant program to the states to enable them to establish comprehensive adult learning information and counseling services, with the proviso that such services be created and operated in close collaboration with business, labor and postsecondary institutions that are providing the instructional services.

Finally, we propose the creation of a national information network, financed through user fees, that would afford ready access to current information on adult learning opportunities and link potential adult learners with local counseling, guidance and support services.

CONCLUSION

We recognize that in an era of looming budget deficits any proposal for increased federal spending must be considered with great care. We believe, however, that the ability of this nation to compete in the world marketplace and to maintain its strength as the bulwark of democracy will increasingly depend upon an educated and trained populace. We cannot afford to have that education and training stop at age eighteen or twenty-two; the future of America demands that the continuing needs of our *nation* of learners be served. We believe that expenditures we propose are therefore investments which will return many fold to the public fisc and to the public weal.

Appendix B

THE INSTITUTIONAL SELF-ASSESSMENT PROJECT

The Commission on Higher Education and the Adult Learner has published *Postsecondary Education Institutions and the Adult Learner: A Self-Study Assessment and Planning Guide* to assist college and university presidents and key administrators in ascertaining the current effectiveness of their institutions in serving adult learners, or their readiness to do so. When fully executed, the assessment and planning process facilitated by the *Guide* will also provide basic information for institutional planning with respect to instruction and services for adult learners.

The *Guide* is being developed and disseminated through grants from the Fund for the Improvement of Postsecondary Education and the Arthur Vining Davis Foundations. During the past year it has been field-tested by 14 institutions in the Great Lakes and South Central Regions with very promising results.

College and university presidents have been given an opportunity to order a complimentary copy of the *Guide* so that they may evaluate its usefulness to their institutions. In addition to its utility in institutional assessment and planning, the *Guide* can be an aid to self-study for purposes of accreditation or state approval if used in the context of the appropriate authority's standards and procedures.

The Commission believes that the *Guide* can be used with full effectiveness only as a team effort initiated with the full support of the chief executive of the institution or system. Using the *Guide* simply as a questionnaire without incorporating it into a more comprehensive process is likely to prove ineffectual.

To assist colleges and universities in using the *Guide* effectively, the Commission is offering regionally located workshops during 1984 and 1985. Presidentially appointed institutional teams of senior administrators work with Commission-trained Assessment Facilitators for a day and a half in preparing to use the *Guide* to maximum benefit on their own campuses. Of course, final responsibility for executing the self-study and planning process rests with the campus leadership, so presidents are encouraged to engage their most capable senior administrators in this process.

The Commission is seeking a broad representation of postsecondary institutions, by type and location, to participate in its first round of workshops. Each institution selected for participation is represented at the workshop by at least two but no more than four senior administrators (e.g., president, chief academic officer, chief student personnel officer, dean of unit within a university, etc.) appointed by the chief executive. Each team receives without charge a complete set of materials for conducting the assessment.

Grants received for this project provide for training and materials without cost to participants. Limited funds are available and additional funds are being sought to assist institutions in partially meeting costs of travel and per diem associated with the workshops. When institutions are notified about participating they are informed of available funding. Training workshops are scheduled in response to demand within each region. Institutions from among those that have applied in the region are selected to participate.

From among the applicants, a select group of representative institutions has been invited and funded to monitor and report their experiences in conducting the assessment and planning process and in effecting the results. Provision has been made to publish selected reports in 1986.

In this project, the Commission and its sponsors have been joined by the National University Continuing Education Association (NUCEA).

Notes

1. Anthony Patrick Carnevale, "Higher Education's Role in the American Economy," *Educational Record*, Fall 1983, page 12.
2. Harold Hodgkinson, "Guess Who's Coming to College," NIICU Research Report, Washington, D.C. 1982.
3. Anthony Patrick Carnevale, *Human Capital: A High Yield Corporate Investment*, Washington, D.C.: American Society for Training and Development, 1982.
4. Carnevale, *op. cit.* page 15.
5. Carnevale, *op. cit.* page 12.
6. Pat Choate, *Retooling the American Work Force: Toward a National Training Strategy*. Washington, D.C.: Northeast Midwest Institute, 1982.
7. John H. Strange, "Preparing for Tomorrow Today: Faculty Training for the New Technologies," *Bulletin of the American Association for Higher Education*, Vol. 36, No. 2, October 1983.
8. Arthur W. Chickering, "Competencies and Characteristics Required for Literacy, Employability, Occupational Success and Effective Citizenship", Unpublished, available from the Commission office.
9. For example, see Jay Mathews, "Retraining '83: the Class in Room E221, *Washington Post*, November 6, 1983, page 1.
10. K. Patricia Cross & Anne-Marie McCartan, *Adult Learning: State Policies and Institutional Practices*. Washington, D.C.: Association for the Study of Higher Education, 1984.

Mr. **Keeton**. The commission is made up of representatives of higher education, labor, business, goverment, telecommunications, and consumers. We believe that concern for the Federal role in support of adult learning is a shared responsibility of Federal, State, institutional, business, labor, and individuals. Therefore, our testimony will have to do with highlighting the Federal role in the context of the expectations that others will be sharing this responsibility.

The commission has spent some 2 years in debate and study on this matter and come to the feeling that from the perspective of the Federal responsibility in this partnership there are five priority concerns that need to be addressed: First, employability of the unemployed, and those who are threatened with unemployment by technological and other changes; second, the sustaining of the present work force under changing job requirements, whether they are at skilled or unskilled or managerial or professional levels of competency; third, elimination of illiteracy which is increasingly a prerequisite to meeting the first two conditions of employability and capability; fourth, equal access to the opportunities that makes these things possible; and, finally, a knowledgeable citizenry which is not possible without these previous conditions.

I speak today also not only for the commission and out of its perspective and its studies but also out of the day-to-day practical experience with trying to administer partnerships between business, labor and higher education and the Government.

You, Mr. Chairman, and other members of the committee perhaps, but you especially, will be interested in the work of the Council for the Advancement of Experiential Learning with the United Auto Workers and Ford Motor Co., the university options program which is now in its pilot phase, making available through tuition assistance by the collective bargaining agreement of those institutions for all active employees of the Ford Motor Co. and through their reemployment assistance program for recently laid-off workers who still have recall eligibility.

We recognize from that experience that a great deal needs to be brought to these problems out of the labor and business sector, and we do not want a kind of effort that places excessive dependence on the Federal Government or even upon the State governments which have the primary responsibility for postsecondary education.

Just to cut down on duplication of testimony, and I will not be repeating our written testimony, let me express our pleasure and endorsement of the initiatives of Chancellor Murphy and their colleagues in reference to part-time learners and especially in relationship to title IV and to Representatives Gunderson and Williams for their bills which we are happy to support and hope, as you requested, that those will be so reconciled that that is a consistent position to take and to Senator Hatch for the initiative he has taken in the Senate. Our hope is that these bills may be brought together in a really strong action on behalf of the adult learners.

I would like to stress the importance of the need for coordination in legislative provisions not only in higher education but in other areas, economic development, in the fields of unemployment compensation and public assistance. Currently the situation is one of piecemeal arrangements that are poorly coordinated. For example, provisions for institutional support are not well coordinated with provisions for financial assistance to individual learners.

In the realm of unemployment compensation regulations there are provisions that make an individual forfeit the right to training and education in order to sustain the unemployment compensation, thereby defeating efforts to bring these people out of their unemployment and into productive relationships that would diminish the cost of the Government and taxpayers for their situations.

Similarly, worker-oriented and economic development measures are not always coordinated well with those on research on the traditional learners.

The reauthorization activity in which we are engaged provides an opportunity to build a more coherent policy, and we would appreciate any assistance that can be given in that respect.

The commission has three priority approaches that it wishes to commend to meet the five national goals that were expressed a moment ago. In the realm of research, for example, there is a need to know more about ways to optimize the use of tuition aid programs by corporations, about barriers to the removal of illiteracy and what works in those efforts, what works most effectively in efforts to do that kind of thing. So an effort in research is needed.

Among the other programs and services, a stress on innovations in programs and services is needed. We have precedents in the work of FIPSE and of title VIII in cooperative education in which small amounts of money have been used with powerful effect to generate new and more effective types of programs.

We would like to see, as the NUCEA has suggested, incentives to institutions to introduce institutionalized programs and services that are especially needed for adult learners. In this respect we would like to emphasize the need for provisions that call for a price from the institutions, an effort that means that they will use declining Federal support and manage their new programs in such a manner that they become self-supporting in the course of time.

So the first major arena that we hope that you will be able to support in the new legislation is that of new programs and services, including research. Second has to do with financial aid, which is not the primary concern of this section, of course, but without it as a complement to this section the benefits of title I would not be fully available. The third is in the area of information and guidance services. In contrast with the situation for youth, there are very poor, limited and inadequate and often partisan information and guidance services that predominate in this field. The youth have their high school counselors throughout the country. Other agencies complement their effort. The recruiting efforts of colleges and universities have been heavily focused in this area. But when older adults seek comprehensive, nonpartisan and well available, easily accessible information on what their options are and what their costs will be, what the conditions are, the fine print that will make it clear whether or not they can effectively use these services, the help is very limited and quite inadequate.

So we recommend in this respect that the beginning that was made, at least in concept, in the earlier legislation on establishing statewide comprehensive information services be supported in the new legislation.

Adult learning from the perspective of the commission is an immediate and compelling national need, not simply for the needs of the individuals involved but for the productivity and competitiveness of our economy, for the strength of the society in terms of the state of its equity and for the quality of its citizenship. We think that while the States will carry a primary responsibility in this area, by virtue of their constitutional position with respect to education, that the Federal Government has an important role which we have been delineating here and we urge the subcommittee to support that in its actions on the upcoming legislation.

This coming November the commission is holding a conference here in Washington, focused upon the role of States in the support of adult learning. It is our hope that this subcommittee's members will be aware of this and have an opportunity to participate in the matter.

Let me thank you again for the opportunity to appear here.

[The prepared statement of Dr. Morris T. Keeton follows:]

Prepared Statement of Dr. Morris Keeton, President, Council for the Advancement of Experiential Learning on Behalf of the Commission on Higher Education and the Adult Learner

It is my distinct pleasure to appear before this subcommittee to discuss the appropriate role of the Federal government in helping to meet the needs of this nation's adults in obtaining the postsecondary educational services they desire, and which our nation requires to enable it to remain competitive and secure in a rapidly changing world. As chair of the Commission on Higher Education and the Adult Learner since its formation in 1981, I have had an opportunity to participate in an exceptionally fertile debate over the course this nation should follow in extending learning opportunities to its citizens beyond what we have come to call the traditional age of college enrollment. Indeed, the Commission was founded with the express intent of formulating policies that relate not only to the federal government, but also to the states and in the institutional and the enterprise arenas that would provide new and increased opportunities for postsecondary education for adult learners. With a membership drawn from among leaders in higher education, labor, business, law and state government, the Commission—now jointly sponsored by the American Council on Education, the Council for the Advancement of Experiential Learning and University College of the University of Maryland—has developed a series of studies and working papers and conducted a number of regional and national workshops and conferences on the respective roles and responsibilities of institutions, business and labor, the states and the federal government in serving this important constituency. While the active involvement of each of these sectors is essential for the success of our efforts, I welcome this opportunity to share with the distinguished members of this subcommittee our views relative to the appropriate federal role in the support and stimulation of adult learning.

The Commission calls upon the federal government to join with higher education, business, labor and the states to meet five key challenges:

Developing and renewing the employability of the un- or underemployed;

Maintaining and enhancing occupational skills in the face of rapid technological change;

Eliminating illiteracy among adults;

Providing equal access to educational opportunity for all adults, regardless of economic, familial, temporal or geographic considerations; and

Developing a nation of knowledgeable citizens who can prosper and enjoy the benefits of an information-technological society.

The Commission has sought to secure the recognition of these goals among its various constituencies, certainly not the least of which is the federal government and this Congress.

I should add that I am also the President of the Council for the Advancement of Experiential Learning—CAEL—an organization that has long been in the forefront of developing new and more effective ways to serve what we have come to call the "non-traditional" student, a term which for the most part also describes today's adult learner population. I know Chairman Ford and other members of this subcommittee will be particularly interested in the work we are presently doing with the Ford Motor Company and the United Auto Workers to facilitate the effective provision of postsecondary education to employees and those displaced or likely to be displaced—by technological change. It is just such efforts—which bring together business, labor and higher education—that the Commission is seeking to foster.

I do not wish the Commission's testimony to duplicate that of the other organizations that are represented here today, or that have made known their views in earlier testimony relative to the issue of student aid for adult learners and other less-than-half-time students. Suffice it to say that the Commission endorses without reservation the proposals put forth by Chancellor Murphy to provide needy adult learners with equitable access to federal financial assistance. We also support, and applaud the initiative, of Representatives Gunderson and Williams, and Senator Hatch, for their very excellent proposals for rehabilitating Title I of the Higher Education Act. I know my colleagues today will be discussing this legislation in greater detail, and I leave it to those more intimately involved in the administration of adult learning programs, and in research on adult learners, to delve into the nuances of these proposals.

I would like to take the time allotted to the interests of the Commission to stress to this subcommittee the critical importance of dealing with the needs of adult learners in a coordinated fashion. For too long, to the extent there has been any response at all to the needs of adults it has been piecemeal and ill-coordinated. This lack of coordination has taken many forms:

Programs of institutional support have not been effectively coordinated with the provision of financial assistance to individual learners;

Regulations governing the payment of unemployment compensation and public assistance benefits affirmatively *prevent* precisely the education and training activities that would diminish the need for such public largesse;

Programs that are worker oriented or oriented towards business and economic development exist entirely apart from those with a research and "traditional" instructional orientation; and

Research into the needs of the workforce for training and retraining remains divorced from that which looks at new ways to deliver appropriate educational service to non-traditional learners.

The reauthorization of the Higher Education Act provides a unique opportunity for these elements to be brought together in a coherent whole, in a fashion that will maximize the ability of the obviously limited resources available to us to meet the enormous needs of this vast cohort of learners.

In its deliberations, the Commission has determined that there are three interrelated needs that must be addressed at the federal level if there is to be a significant improvement in the delivery of and access to adult learning services. Each of these elements is equally important, and I cannot overstress the need to deal with them all. Two of these elements are addressed in the Title I proposals I have alluded to previously. The third is embodied—at least in part—in the proposals put forward by Chancellor Murphy on behalf of City University of New York and the other members of the coalition concerned with the plight of the less-than-half-time student. I want to address each of these separately, but I beg of you not to take my order of discussion as any indication of their relative importance.

The first issue is to ensure that there are postsecondary services available and appropriate to the needs of our adult population. Our colleges and universities—or at least a critical mass of them—must offer the kinds of educational services, both as to content and to the form and manner of delivery, that is responsive to what our nation's adult learners want and can use. The Commission endorses a two-pronged approach to this issue. We must invest in both research on adult learning as well as in the application of the results of such research. There is a significant national interest in securing the support of research that addresses problems encountered in serving the needs of adult learners, which problems are amenable of solution through the application of new and further knowledge. Improvements in practice are needed to enhance the quality, effectiveness and availability of adult learning, and must take into account the most current research developments. Means must be provided for both practitioners and researchers to continually inform and stimulate one another, not only for the benefit of the adults who are being served, but for the ultimate benefit of the society which is fueled by this learning.

New research, both scholarly and applied, is indeed a major need. But is is not enough: the Commission calls also for the establishment of an institutional incentive grant system, to assist institutions in overcoming the inertial force of economics that tends to restrain innovation and change. I believe we can look to the Fund for the Improvement of Postsecondary Education for an example of how relatively small sums have been leveraged to create new knowledge for the delivery of postsecondary education, and we call upon this subcommittee to focus a similar approach on the particular needs of adult learners. The Commission also commends to this subcommittee the experience of the Title VIII Cooperative Education Program, through which a modest investment of federal funds has so radically changed the way a large number of institutions deliver undergraduate education. The Commission believes that the same sort of catalyst is needed to propel a larger number of institutions into serious—and competent—service to adult learners. We do believe, however, that an institution should have to pay a high price for such support, in the form of a binding commitment to replace federal dollars, on a declining share basis, with resources derived from institutional sources—which may, and I believe should, include funding generated out of the business community, which will benefit greatly from a reinvigorated institutional commitment to adult learning. We must avoid, at all costs, creating yet another dependency upon the federal dole, with programs that live or die solely on the basis of the availability of federal funds.

The Commission has further concluded that assuring the availability of appropriate adult learning programs and services is an inadequate response without ensuring that those adults who want and need to access those services have the economic ability to do so. Since 1965, this nation has committed itself to the proposition that no otherwise qualified student should be denied access to postsecondary education solely on the basis of his or her financial status. The student financial assistance programs established under the Higher Education Act have in fact substantially accomplished this purpose—at least for those persons who are traditional college students enrolled on a full time basis and proceeding in relative lockstep towards their degrees. These programs do not work anywhere near as well in serving the education and re-education needs of our adult population, for a multitude of reasons. Indeed, one of the Commission's first projects was to have prepared for it an analysis of *dis*incentives that estrange adults from nearly all of the student aid programs—including those administered by other agencies, notably the Veterans Administration. We strongly urge this subcommittee to heed the proposals before you with regard to achieving equity for needy adult learners. We also urge the examination of new approaches to providing support for adult learning, including the use of tax incentives and tax-favored savings plans, as well as the coordination of work-related programs with those that are in the higher education arena.

Last, but not at all least, is the finding of the Commission that neither new programs or more financial support for learners will accomplish very much if the target population is unaware of them. The lack of information resources and guidance services which we make available to adults is nothing less than a national disgrace. High school students have counsellors and school libraries with catalogues and application forms. Institutions reach out to prospective students with information and support. But the worker who wants to commence or continue his or her higher education must more often than not do so in the dark. At best, he or she responds to a cryptic advertisement placed by a local institution, or learns of a program from a friend or co-worker. But that is not counselling and guidance, nor does it represent a reliable way to get information to prospective adult learners about the range of options available to them. Because adults are not conveniently concentrated like high school students, we need to address their information and guidance needs differently, but those needs are no less real, and the Commission urgently calls upon this subcommittee to establish a comprehensive program to fill this void.

The Commission has found that information services ought to be provided on the broadest basis. We therefore support proposals that would forge a partnership between the federal government and the states to establish and maintain state or region-wide adult learning information services. Some states have gone ahead and done exactly this—with considerable success and a rather impressive return on their investment. As the federal government has done with state grant programs, through its partnership under SSIG, so the federal government should work with the states to facilitate the creation of sophisticated information and guidance systems aimed at the needs of adult learners. We particularly support measures to help states set up technologically—advanced information and guidance systems that bring the support services TO the prospective adult learner—to his or her workplace, library or home. Contemporary telecommunications technology make this feasible, and an effective federal-state partnership could achieve its broad adoption.

The Commission commends to the members of this Subcommittee the following fundamental finding:

"For reasons of national interest embedded in the economic, political, and social determinants of the quality of life, the fostering of learning by adults is an immediate and compelling national need, a need requiring a lucid and forthright statement of national policy and immediate attention by the nation's colleges and universities."

The members of the Commission do not believe that it is the responsibility of the federal government to support adult learning to the exclusion of support for traditional students, nor indeed do we see the federal government as having the major responsibility in this domain. We look to the institutions and to the states for that primary responsibility. But as I have discussed today, we do see a very valid federal role, and we most strongly commend to you the fulfillment of that role.

The Commission is continuing its work, at present placing particular emphasis on the role of the states in meeting the needs of adult learners. We have scheduled a national conference later this year to examine this issue, and we trust the members this subcommittee will wish to be apprised of—and indeed involved in—this effort to stimulate change and commitment in our state houses and governors' mansions. We are also continuing to devote considerable attention to the need for institutional change, primarily through our ongoing Institutional Self-Assessment Project. I am here before you today to urge the active participation of the federal government in this emerging partnership for adult learning.

On behalf of the members of the Commission on Higher Education and the Adult Learner, I thank you for this opportunity.

Mr. **Ford**. Dr. Phelon.

STATEMENT OF PHILIP PHELON, PRESIDENT, CUMBERLAND COMMUNITY COLLEGE

Mr. **Phelon**. Mr. Chairman, thank you for the opportunity to appear before you today.

I have been asked to speak on behalf of the American Association of Junior & Community Colleges and its more than 1,250 member institutions regarding what we feel should be included in title I of the Higher Education Act.

I come to you today as the president of a small rural college located in southern New Jersey. Geographically we are about halfway between the Delaware Memorial Bridge and Atlantic City. I would like to say we are in the garden spot of the Garden State. Our student body is composed of about 65 percent female. Average age is 29 and two-thirds of our students are part time.

As a result of a changing local economy, our county has experienced unemployment rates as high as 18 percent over the past 5 years and has consistently been ranked as one of the highest unemployment areas in the country.

The depressed economic condition has resulted from the challenge of foreign competition to our glass industry. The most visible results have been closing of several glass plants and continued layoff at other plants. This situation has resulted in an ongoing need to retrain for other fields or to upgrade skills to meet the new technology in existing industries.

The economic situation has also forced many women to return to outside employment as a way of stabilizing family income. It is these two situations which I would like to deal with for you in my comments this morning.

I would strongly recommend to you that the new Title I program include those provisions necessary to first address the needs of dislocated workers and, second, to train women entering into or returning to the job market. Provision should be made for a wide range of services to assure that these two groups succeed in obtaining their educational and employment goals.

The needs of dislocated workers are frequently overlooked in consideration of the Higher Education Act because most people believe that this group is sufficiently covered under other bills such as title III of the Jobs Training Partnership Act, the Perkins Act and the Adult Education Act. However, suffice it to say that the most helpful sections of the Perkins Act for dislocated workers and adults needing retraining have not been funded. Title III of JTPA is interested in specialized short-term training. However, based on our experience the typical title III falls short of addressing the needs of people seeking this service.

To illustrate my point, let me cite data we have developed in our efforts to retrain people forced out of work by plant closings. We have required each individual to take a diagnostic placement test which measures their skills in the areas of English, reading, and mathematics. We have found that in these targeted groups, usually comprised of people over 40 years of age, 65 percent could not read at the eighth grade level. Seventy-four percent could not perform mathematic skills expected of an eighth grade student; and, furthermore, we were dismayed to discover that 15 percent of the test group could not read a simple sentence.

It is, therefore, asking for the impossible to expect any program to retrain individuals in specialized disciplines for return to new employment without addressing their basic skills and needs. Simply put, how can you train an individual for a job in newer technological fields when the individual cannot read?

Therefore, I urge you to consider in title I a linchpin provision which would link basic skills training to the technical training called for in JTPA and the Perkins Act. There is a need not only for basic skills training but also for extensive individual counseling and support programs to help workers overcome the many problems associated with sudden unemployment, especially when they are the only source of income for a family.

Our experiences have demonstrated that these returning students require an intensive and comprehensive assistance program during the first several months on campus if they are to succeed. Without counseling too many become easily frustrated, burdened with self-doubt and often withdraw with feelings of personal failure. It is always easier to start anew than to start over. Having to start over is most often the result of defeat, so the first challenge is to create a positive atmosphere of hope and confidence.

Returning to school also calls for a number of personal and family adjustments. We provide assistance for these transitions through counseling, group sessions and peer support teams. Such support programs are particularly critical for the displaced homemakers and the structurally unemployed. It is, therefore, important that counseling and group help sessions be continued as permissible activities under the new title I program.

Mindful that the end result of adult training programs should be the acquisition of marketable skills, it is important that there be a job available for these skills. Provisions such as incentive placement clauses, which are common in the Jobs Training Partnership Act, should be included in any training program offered under title

I. This would ensure that the training institutions and agencies assume responsibility for designing quality training programs which are directly related to the job skills training.

It would also be appropriate to include provisions for the technical training to include on-the-job experience as a part of the overall training package. Such training opportunities could be provided through cooperative education, internships, or other on-the-job training arrangements which would be negotiated by the training agency and local industries or businesses.

We have found that with several JTPA training programs practical on-the-job experience enhances employment opportunities. Special programs to assist individuals to enter or reenter or return to postsecondary education are difficult to develop and maintain. It would be a mistake to believe that institutions can develop successful programs by themselves. The process of identifying potential participants is best accomplished by working with various community organizations such as labor unions. Such organizations can be extremely helpful in disseminating program literature and recruiting participants. Therefore, it would be advantageous to include in title I legislation language which encourages articulation with appropriate community agencies.

In closing, Mr. Chairman, I would urge that the title I legislation would include provisions for the dissemination of information on realistic employment opportunities, assessment of individual abilities, development of career goals, training programs that match individual capabilities to jobs and the involvement of placement services. Where some of these services are available through other programs, title I should serve as the linchpin as well as the provider of the missing parts. In this way the act would avoid needless duplications while assuring that the needs of participants will be served.

Thank you, Mr. Chairman.

Mr. Ford. Thank you.

[The prepared statement of Dr. Philip S. Phelon follows:]

Prepared Statement of Dr. Philip S. Phelon, President, Cumberland County College, Vineland, NJ

Mr. Chairman, Members of the Committee, thank you for the opportunity to appear before you today to discuss our views on items that should be included in Title I of the Higher Education Act.

I come to you today as the President of a small, rural community college located in southern New Jersey. Geographically, Cumberland County is situated approximately 40 miles southeast of Philadelphia, and approximately 40 miles west of Atlantic City. As a result of a changing local economy, our county has experienced unemployment rates as high as 18 percent over the past five years, and has consistently been ranked as one of the highest unemployment areas in the country. The depressed economic condition and foreign competition has had a significant, adverse effect on our main industry, glass manufacturing. The most visible results of our poor economic condition has been the closing of several glass plants and continued layoffs in other plants. This situation has resulted in an ongoing need to retrain workers to either find new employment or to retrain to keep present jobs as the local industries retool. The economic situation has also forced many women to return to employment, outside the home, as a way of stabilizing family incomes. It is these two situations which I would like to deal with in my comments today.

I would strongly recommend to you that the new Title I program include special provisions to address the needs of dislocated workers and women entering into or returning to the job market. Provisions should be made for a wide range of services to assure that these two groups succeed in attaining their educational and employment goals.

The needs of dislocated workers is normally dismissed from any consideration in the Higher Education Act because most people believe that this group is sufficiently covered under other bills such as Title III of the Jobs Training Partnership Act, the Perkins Act, and the Adult Education Act. However, suffice it to say that the most helpful sections of the Perkins Act, for dislocated workers and adults needing retraining, have not been funded. Title III of JTPA is interested in specialized short-term training. However, based on our experience, the typical Title III programs fall short in addressing the true needs of the people seeking this service. To illustrate my point, let me cite data we have developed in our efforts to retrain people forced out of work by plant closings. We have required each individual to take a diagnostic placement test which measures their skills in the areas of English, reading and mathematics. We have found that in these targeted groups, usually comprised of people over 40 years of age, 65 percent could not read at the eighth grade level and 74 percent could not perform the mathematical computations expected of an eighth grade student. Furthermore, we were shocked to discover that 15 percent of the test group could not read the simplest of sentences. It is, therefore, asking for the impossible, to expect any program to retrain individuals in a specialized discipline for return to new employment without addressing their basic skills needs. Simply put, how can you train an individual for a job in the newer technological fields when the individual cannot read?

Therefore, I urge you to consider in Title I a lynchpin provision which links basic skills training to the technical training called for in JTPA and the Perkins Act. Not only is there a need for basic skills training but these individuals also require extensive counseling and support programs to help them overcome the many problems associated with the loss of one's job, especially when it is the only source of income for the family.

Individuals seeking to enter or return to higher education to acquire new marketable skills are normally expected to walk in and become successful, full-time students with a minimum of effort. In reality our experiences have demonstrated that these returning students require an intense assistance program during the first several months on campus if they are to succeed. Unless assistance is given, these individuals usually become frustrated, full of self-doubt and soon drop out to be condemned to a life without much hope. The problems they encounter in addition to a normal fear of starting over, especially when they have been out of school for a long time, include: forgotten study habits, and the lack of survival skills necessary to succeed in a classroom or laboratory. Returning to school also calls for a number of personal and family adjustments. All too often however, family problems are sufficiently severe to cause the individual to drop out. We have found that a combination of intense counseling, followed by group sessions aimed at building the individual's confidence with peer support teams are key ingredients of a successful program. Such support programs are particularly critical for returning women. It is therefore important that counseling and group help sessions be included as permissible activities under the new Title I program.

Mindful that the end result of adult training programs should be the acquisition of marketable skills, it is also necessary to consider the technical training aspects of these programs. It is not enough to bring in an individual and provide them with counseling and support services if they are unsuccessful in finding employment at the conclusion of their training. Retraining programs must be in areas that produce jobs at the end of training. If a person has made all of the sacrifices to complete a training program only to find that they are still unemployed with little hope of rising above their former station, then we have failed. Not only have we failed, but we are guilty of the cruelest of hoaxes. Provisions such as incentive placement clauses, which are common in the Jobs Training Partnership Act, should be included in any training programs offered under Title I. This would ensure that the training institutions and agencies assume responsibility for designing quality training programs which are directly related to the jobs skills training.

It would also be appropriate to include provisions for the technical training to include on-the-job experience as a part of the overall training package. Such training opportunities could be provided through cooperative education, internships, or other on-the-job training arrangements which would be negotiated by the training agency and local industries. In our experience with several JTPA training programs that practical, on-the-job experience not only is a great educational benefit, but also provides additional benefits associated with finding employment in the work force.

Special programs to assist individuals to enter or return to postsecondary education are difficult to develop and maintain. It would be a mistake to believe institutions can develop successful programs by themselves. The process of identifying potential participants is best accomplished by working with community organizations with close ties to the participants such as labor unions, women's organizations, and community organizations. Such organizations can be extremely helpful in disseminating program literature and recruiting participants. Therefore it would be useful to include in the Title I legislation the encouragement of programs that are associated with community organizations.

In closing I would like to say that individuals seeking the services traditionally available under Title I face many barriers in their pursuit of postsecondary education. To eliminate these barriers, the Act should allow for the dissemination of information on realistic employment opportunities, assessment of individual abilities, development of career goals, training programs that match individual capabilities to jobs, and placement services. Where some of these services are available through other programs, Title I should serve as the lynchpin as well as the provider of missing parts. In this way the Act will avoid needless duplication while assuring that the needs of the participants will be served.

Thank you.

Mr. FORD. Dr. Keeton, you mentioned the program that is going on now as a result of the collective bargaining agreement between the UAW and Ford Motor. There are similar provisions in the contracts with Chrysler and General Motors. It is interesting that the agreement of the company to make that expenditure is in lieu of additional wage demands, and it demonstrates for the first time to my knowledge a willingness of the work force that does in fact have a job to forego a direct benefit to themselves in favor of education and reeducation for people who are likely to lose their jobs or who have indeed already lost them, and there is no public money involved in that inasmuch as the expenditure by the corporations is in the form of tuition payments to students which makes it posssible for them to go. And still the regular educational institutions, they do not carry on any program as such. They merely facilitate finding an appropriate program for someone and offset a part or all of the costs of attending that program for the individual receiving the additional education. Is that correct?

Dr. KEETON. Yes; there is a Department of Education discretionary grant that is now assisting with some of the costs of the university and college development to be able to render these services. But you are quite correct about the tuition payments.

Also the commission and CAEL have brought foundation support to complement the UAW-Ford collective bargaining agreement support, so it is quite a comprehensive partnership; and as you say, I believe that it is the most far-reaching agreement toward recognizing what you might call a new agenda in business and labor. It is no longer a question for the labor, how do we keep the present job but how do we keep our members employed long term. If the present job has to be lost through technological change, then these educational training measures and the reemployment assistance help them get the next job. And for the company it is not merely how do we prepare for the immediate job, but how do we keep the workers that we retain competent to do the kinds of new jobs.

Ford Motor Co. closed its St. Louis plant January 24, shut down to retool for robotization and automation and tailored training with the local community colleges and other training institutions, reprepared that work force for an opening on April 24 and now they are doing an entirely new product.

Mr. FORD. In my area General Motors has, aside from the new arrangements that will be made for tuition, and for a couple of years now a program with Washtenaw Community College located near General Motors' transmission plant where they make transmissions for a lot of American vehicles besides their own as well as some of the lesser known vehicles like the Rolls. I can point out that the epitomy of clockwork engineering and technology gets some of its transmissions from my congressional district.

But they are automating with a vengeance, and they discovered they had a relatively highly skilled work force of machinists and those machinists are now being replaced by automatic machines controlled by computers. And they decided that it would be a lot better to take the already trained machinists who know what the whole process is about and make them computer literate so that they could accommodate to the change and they would not have to go out and start all over training machinists. That was clearly something that has been beneficial to the employees but is also beneficial to them in getting the kind of work force they want.

I recently talked to someone who is working with a program at Washtenaw Community College and asked what kind of courses are you giving these people and, of course, they are giving them the basic computer courses, but they are also requiring them to take courses in psychology and they have a course in the psychology of automation because people who have a work pattern throughout their lifetime who are suddenly confronted with this, they act the same as I do when I see the young people on my staff playing on the computers. They can do all these magic things and it frightens me. I say I do not trust anybody over 30 years old with a computer in their hand because the rest of us are a little bit afraid of them. [Laughter.]

And I found it quite interesting that they are giving a college level course and it is specifically tailored to deal with the psychological impact of now living with this kind of sophistication and teaching, in fact, to accommodate to the idea that it does not necessarily have to be an enemy; you can make it work for you as well.

The second thing you mentioned that I thought was very interesting, and it has puzzled me for a long time, is the reference to the unemployment compensation laws of the several States. In the Midwest the States that are grappling with the allegation that their comp laws are unfair and that is why they are losing business to other parts of the country, there has probably been more attention to that in recent years than there had been over any sustained period of time in the past, and this characteristic that you mentioned is a fascinating dichotomy, that if you are getting unemployment compensation and you engage in a training program, you lose your unemployment compensation and, in fact, there is a negative influence on retraining this person for a different job. Until the unemployment benefits run out, it is an economic disaster to try to train for a different job.

On the other hand, in workmen's compensation for many years they have cooperated with what we call vocational rehabilitation; and if you have a job where you were required to use your hands or you are required to walk a lot and you injure your legs or your feet, it is considered good to be trained to be able to do something else that does not require it to get you off of the workmen's compensation rolls. Private insurance carriers have expended a lot of money over a good number of years developing courses like this to reduce their long-term costs in maintaining a person who has become disabled for the work that they were doing but not disabled from all work and really giving them new career goals. There are former factory workers in my state who are now accountants and computer operators and doing a lot of other things that they never would have dreamed of as a career because they can do those things but they cannot do the kind of heavy manual labor that they were doing before.

Maybe we could provide through the education system a better understanding of the idea that when somebody today, as distinguished from different periods in our society, reaches us through the unemployment rolls, that it does not mean that they are not employable; it means that they are not employable at the kind of work they have been trained up until that time to do and that in the long run we would save money for the States and the Federal Government if we started to encourage rather than discourage them to learn to be able to do something else, take another job without sweating out asking for extensions on unemployment and so on.

It is very difficult for that to be done by politicians at the local and State level. It is very difficult for business to tangle with it, and it has so far not been given much attention by educational institutions. It appears to me what you are suggesting is we might provide through educational institutions a means by which people could be shown the light and brought together such as the project you were just describing to accomplish ultimately a goal that everybody, when they sit and work it through, would know would be a worthy public objective. That is the first time that anyone to my knowledge from an academic background has suggested that approach, and I hope we can pursue that further with you.

Mr. **Keeton**. I would be delighted.

One of the features of the United Auto Workers-Ford program is a life in education planning which discloses something Dr. Phelon is speaking about, that blue collar workers have much broader potential—you referred to the psychology training and so forth of these machinists—much broader potential even than they commonly recognize or other people will give them credit for, and one of our functions in this situation, especially with the unemployed or those threatened with unemployment, is to broaden the horizons of their hope and expectation and then put the tools in their hands to qualify for the available work.

Mr. **Ford**. It is not unusual that the experience we have had with persons in the CETA programs and more recently with JPTA and with our vocational programs is that we find when we have a plant close and we had relatively well paid industrial workers who suddenly have no hope of ever coming back to this kind of work, when they sit down with a professional they discover they have all kinds of skills that they could put on paper that they never thought of. And you will find somebody in their late thirties who came right out of high school, went into the factory, started making what was in those days pretty good money and they could live a good middle class lifestyle with it and sort of did not feel the necessity to develop these skills that was beyond what was necessary for progressing in that job career. And frequently we find that people at that point have never applied for a job where anyone has asked them what kind of things do you know how to do. They have never been able to put that on paper and a counselor can sit down and say in order to do this you must have been able to do this, and they are quite surprised when they see, well, gee, with just a little bit more training I could be in this and that. It is almost magical to see it occur, and we have seen enough to know it works. But they have to find a way to get them to the professional trainer or educator who can evaluate and help them pick a direction to go.

Mr. **Keeton**. We have a process called the portfolio development by the worker as to both academic and work skills, mapping out what the person already has and then using computer-assisted career guidance to link that with the kinds of options that might be available thereafter. This would tie especially into the kinds of information services that might be managed at the State level where they would have a comprehensive knowledge of developing job options; and with this kind of information about individuals one could work out the match between the two, discover the training and education fit that was needed as an addendum in order to qualify the person to move right into new work.

Mr. **Ford**. Dr. Phelon, I did not notice you mention—maybe in your prepared testimony you did—any specific bill's approach in the ideas that you are advancing.

Mr. **Phelon**. I think in general, Mr. Chairman, I think there are some specifically——

Mr. **Ford**. The assumption is that there are not differences in intent and thrust—

Mr. **Phelon**. From what I gather from what the Congressman said this morning, and I am familiar with the proposed legislation, probably the objectives are similar, but I think there are some specific areas I would be encouraging you to include such as the support for counseling and that type of support which workers need so desperately when they first enter retraining in an academic environment and women, too.

We found under the old title I legislation in the early days we had a grant for 2 years. I think that is one of the reasons that we are 65 percent female in our student body now, and most of them were displaced homemakers coming back to college and they needed a great number of support services. They needed counseling, but they needed—sometimes they were abused women. There is nothing, Mr. Chairman, that wrenches your heart as much as to stand in a registration line or the week after registration at the registration office and have a woman in tears say, "I have to withdraw from college or my husband is going to divorce me." Here is a person in her thirties that wants to obtain an education. And if we are going to encourage that type of person to better themselves and their opportunities for a job, in a good job, we are going to have to provide the support needed in terms of not only counseling but advisement on what type of services are available to them and that type of thing. We have found that peer sessions, for instance, are very helpful.

So I think there are parts that I would encourage Congressmen Gunderson and Williams to include, that type of thing.

I think the other thing is that we need to have title I serve, as I said, as the linchpin between the Perkins Act and JTPA, particularly in the area of basic skills because you cannot learn basic skills in 13 weeks while you are teaching a skill under JTPA; and if a person cannot read and write—the reason we got into this, we were asked in combination with a proprietary institution to do some jobs training for the casino industry. Now, it is a very basic thing, blackjack dealer. And so we set up an afternoon's testing of workers from the plant that had just closed, Owens-Illinois manufacturing plant, and we asked and we started testing them, and at the end of the day we only had one person that could qualify to become a craps dealer and three that could qualify as a blackjack dealer because of their mathematic skills. You know, to count to 21 could not take an awful lot of mathematical skill.

So it took us 4 days of testing to get a class together. So, you know, it is very difficult. You do not learn basic skills to the level needed in American technology today in 13 or 16 weeks under a JTPA program. It takes something longer than that.

And I maintain, Mr. Chairman, that is one of the great services we can provide to our citizens, particularly the middle-aged citizen, who is upgrading basic skills. With that, as you said, they have a lot of skills; but if they have the basic skills to impart what they know, I do not think you can stop them. I have great confidence in the American worker.

Mr. **Ford.** Thank you.

Mr. McKernan.

Mr. **McKernan.** No questions.

Mr. **Ford.** Mr. Penny.

Mr. **Penny.** No questions.

Mr. **Ford.** Mr. Gunderson.

Mr. **Gunderson.** Thank you, Mr. Chairman.

I want to pursue for discussion with Dr. Phelon on the whole issue of JPTA, linchpin, et cetera and I agree there ought to be coordination. I think we all support that. I will tell you that at the present time I would fight any type of legislatively directed coordination because I think the result of that would be interpretations which would suggest that we are then recreating in the Higher Education Act another vocational education and a JPTA which is not the intent in any way, shape or form. Many people will tell you, as they told me in the past, is the reason title I never gets funded is people say it is simply a duplication of job training and voc ed, et cetera. So this is sensitive to your concerns, and I agree 13 weeks does not solve a basic skills training problem. I must tell you that I am not sure whether this is the solution. Perhaps you and I in the future need to talk more about what is the solution on that because I want to help find it. But I am not sure exactly this particular aspect of the Higher Education Act would serve as that solution and still accomplish what I think so many of us, yourself included, are trying to do in terms of that nontraditional student being brought back into the traditional higher education community.

Any comments?

Mr. **Phelon.** No. I would be happy to work with you, Congressman, and I am sure that others from the AJCC would be happy to give you input because we have a lot of experience in training older workers under our belt, and I think maybe this is not the answer but at least your and the other congressional recogniztion of the problem I think is encouraging.

Mr. GUNDERSON. Thank you.

I appreciate your comments and obviously appreciate the presentations of all of you, and I hope they have been helpful. I do not know if either of the other two want to comment at all because what Dr. Phelon has brought up is not the first time this issue has been brought forth, how do we balance this tightrope between the traditional role of title I that we want it to be as opposed to the concerns about job training, voc ed, et cetera. Do either of you want to make any comments in the hearing?

Mr. KEETON. I would like to support that suggestion that the provisions for information and guidance should be such as to enable the adults to make appropriate use of the different kinds of provisions and the different kinds of education. The chairman is pointing out the fact that machinists no longer merely need training in the engineering and application fields, the hard sciences, but also in psychology and other disciplines having to do with relationships in the workplace. So there is clearly a need for a kind of educational development for workers that brings all these things together.

A way to get the coordination without creating a new bureauracy and impose a lot more problems than are solved is, at least in part, through the appropriate inventorying of what the individual's needs, interests, capabilities, potential are against the resources available in different measures with provisions then for a kind of integrated dealing with that individual around solving the problem

Mr. SNIDER. Congressman Gunderson, I quite frankly had mixed feelings when I was invited to testify on title I because I reflected back to our experiences at Colorado State University in the sixties, rather in the seventies, with the title I program; and as I recall, we were funded to use one of our staff members from the Cooperative Extension Service to establish community services, advisory committees in the various communities around Colorado, and that was done and this person traveled around the State calling together these committees to talk about how they could plan a more effective community services program in Colorado, especially in these smaller communities.

It was not a very satisfying experience. As a matter of fact, as soon as the funding ran out there was no more planning and there were no more meetings of these committees. So it really did not turn out to be an extremely positive kind of experience.

On the other hand, what I really like about your bill and the direction in which title I is moving now is the fact that it yields, proposes to yield results. If it is funded, it will yield results in the form of programs and activities that will pay off for the participants, the adult part-time student. So I like the direction in which it is moving now, and I certainly agree with your notion that one changes careers on the average of five times. In fact, I have heard as much as eight now, major career changes in a lifetime; and certainly lifelong learning or continuing education has a major role to play in the future. And if we are going to serve the total adult part-time population, I think we are going to need the support of a title I program.

Mr. **Gunderson**. Thank you.

Thank you, Mr. Chairman.

Mr. **Ford**. Mr. Perkins.

Mr. **Perkins**. I will pass, Mr. Chairman.

Mr. **Ford**. Mr. Hayes.

Mr. **Hayes**. Thank you, Mr. Chairman.

I was particularly impressed when I had to leave on the tax waste rules you referred to with the statement from Dr. Snider.

That portion of your statement that interested me very much was when you say, "College enrollment among minorities represents a special cause for concern," which I am in complete agreement with, "not only for the higher education community, but for our Nation as a whole." You say by the year 2000 almost one-third of the available college-age youth will be minorities.

I wanted to know why you arrive at this kind of figure. What is your source of information to project that number?

Mr. **Snider**. That figure was given to me by the staff of NUCEA, and I can provide that information to you for the record but not right now.

Mr. **Keeton**. I can tell you part of the basis for it. The birth rate among minorities is higher than among others, and there is a growth in absolute numbers in the population. The fastest growing segment, I believe, is Hispanic with considerable portions of immigration involved there. So those are the two major factors, I think, that account for that change.

Mr. **Hayes**. I think it needs to be said more, be more widely publicized. What I see is—I think you say it in your statement—a very tragic situation developing, that is developing among the minorities, lack of opportunities for minorities to really have the opportunity for higher education. You said frequently they receive little encouragement to pursue postsecondary studies. I want to know if you agree with me. I do not think this is by accident. I think it is by design.

Mr. **Snider**. You want me to answer that?

Mr. **Hayes**. Yes.

Mr. **Snider**. I think I tend to agree with you. I would like to speak from my experience in Colorado. In the northern Colorado area we have a large Hispanic population, and it has been our experience that the programs we offer at the university very often are not attractive to our ethnic minority population. We have not moved far enough ahead in marketing, if you will, programs that will attract our minority groups.

One program that we have tried with some success is a bilingual program that we offered right in the community where a majority of the Hispanic populations live in northern Colorado, and we found that we have had some success with that because as a result of taking one course that is bilingual in nature, delivered in a bilingual mode, that it allowed some self-esteem and self-confidence to develop to the point where then these particular students feel comfortable to come onto a campus or pursue further their higher education studies. But we have limited resources to try those kinds of programs and, therefore, have not done nearly enough with it and would like to do more.

Mr. **KEETON**. Another example of what causes the kind of situation you are talking about is sustainability in our past practices about what was good and what was not. For example, we typically used scholastic aptitude tests of a multiple-choice standardized form to measure capability for college studies. The organization I managed has developed with the aid of other researchers an alternative way of assessing potential, which is fairer to older adults and to ethnic minorities and other distinctive groups, because it gets at capabilities that cannot be measured by simply reacting to preset questions with fixed alternatives.

Now, those things are not intentional bias, but they are byproducts built into methods that may once have been relatively helpful, may have been progressive in opening up opportunity but have now come to be dysfunctional with respect to some populations.

Mr. **HAYES**. Thank you, Mr. Chairman.

I just wanted to say if, Mr. Snider, you run through your research or your staff research into some information which specifically establishes more clearly the percentages you spoke about by the year 2000, I would appreciate being able to receive them.

Mr. **SNIDER**. Happy to do that, Congressman Hayes.

Mr. **HAYES**. Thank you very much.

Mr. **FORD**. Thank you very much gentlemen.

Our next panel consists of Ms. Anabel Newman, professor of education, Indiana University, representing the International Reading Association; C. P. Zachariadis, executive director, Association for Community Based Education; Mr. Raul Yzaguirre, National Council of La Raza who will be represented today by Ms. Lori Orum, senior education policy analyst for La Raza; and Dr. Donald R. McNeil, provost, American Open University, New York Institute of Technology.

Without objection, the prepared statements of the members of the panel will be inserted in the record in full. You may proceed to add to them, supplement them, summarize them, or comment on them in any way you feel would be most helpful to the record.

We will start first with Anabel Newman.

STATEMENT OF ANABEL NEWMAN, PROFESSOR OF EDUCATION, INDIANA UNIVERSITY ON BEHALF OF THE INTERNATIONAL READING ASSOCIATION

Ms. **NEWMAN**. Mr. Chairman, members of the House Subcommittee on Postsecondary Education, my name is Anabel Newman. I am a professor of education at Indiana University in Bloomington, and I worked with disadvantaged and underachieving learners for over 25 years.

I represent the International Reading Association on the national Coalition on Literacy, and I would be happy to discuss that with any of you at any time. That will not be discussed in depth at this point.

I am here today on behalf of the IRA to present testimony on the reauthorization of title I.

The International Reading Association represents over 60,000 members. We have 1,180 affiliate councils in 30 countries.

The testimony is divided into three basic areas: The need, the problem, and the solution. I have seen the need in my own personal experience in everything from working with my students in classes at the university level to working individually with the nonreading adult.

One of the major problems that we face at this time is trying to define what is meant by illiteracy, and we are plagued now by the unknowns that exist in that area and we are going to need a great deal of research before we solve that particular problem.

One of the commonly accepted definitions of illiterary, and that definition has changed from the early 1900's from the ability to read or write a name, which was the definition of literacy in the first part of this century, to the ability to read a simple sentence and then we moved to saying, well, if a person had gotten to fourth grade that probably he was literate, and then we realized that did not work. Some are saying now if they get to eighth grade that probably defines literacy, and we realized that does not work because we have people who are graduating from high school who are still not able to read and write functionally.

So we know that there is a problem. There are millions of Americans who cannot read, and we do not have enough people to teach them how; and the price of tutoring is beyond what we are capable or willing to assume now as a society.

There are many reasons for the nonreading adult. We are seeing now and I saw on the Moyer's program the other night the thousands who are streaming across the border, and we are told that one-third of the population in these Southern, Southwestern states is going to be Spanish-speaking within the next decade or so, many others who were neglected or pushed out of school. I worked personally with people, one man who spent a lifetime trying to get his older brother through school. He got the brother through. He and the rest of the family got this brother through a master's degree in education while the rest of the family was on a farm in Mississippi. It was not that he did not want to go to school. He did not have the opportunity. They could not afford it at that point.

It takes many hours of one-to-one instruction to move the nonreading, the truly illiterate adult into a state of literacy, and yet there are not enough tutors to meet that particular need.

I talked, for example, with the assistant to the mayor of New York at the launching of the National Awareness Campaign in December of last year. She was at that point incredulous that we would launch a campaign like this. She said, "Where will we get the money to meet the needs of the people who are going to be knocking at our doorstep for help?"

So that the need is a great one. The price of what can happen if we can solve this problem is also a tremendous one. I worked with one young man, for example, who we figure over a period of 5 years saved the taxpayers $30,000. How did he do that? Well, he had a job. He was paying taxes, and he was not on welfare. So we need the people who can put in the man-hours. There were several of us who devoted a great deal of time to getting this young man to the place where he could handle his getting his driver's license. He has now four children, a family, and is a taxpayer. We need to multiply what we did in that instance by a great number of personal tutors who can work individually with these people.

Now, where do we get the training for that sort of thing? I brought, as I always do, my car reading, my plane reading to all of these different things and they did not necessarily relate to this particular hearing, but just in opening and reading these things I was reading, for example, what the State of Indiana is doing right now in its literacy program, and in the city of Indianapolis they said it might seem callous in light of the tremendous need, but a concern of the Greater Indianapolis Literacy League has been to limit publicity to attract students because they do not have enough tutors.

And the IRA would suggest, the International Reading Association would suggest, that if we can provide tutor training through an existing mechanism, through the schools of continuing education—and we have, for example, at Indiana University a School of Continuing Education which has grown tremendously and our director said he sees the number, the percentages that are being served by that particular school within the next decade moving from about 20 to about 50 percent, so that we see the growth of those particular schools.

Our contention would be that that can be tremendously increased to also train the tutors who are needed for this particular work. The literacy program could be offered in these schools by professionals who are prepared from the fields of instruction, reading, and adult education.

One of the problems right now is that the volunteer organizations such as Literacy Volunteers of America and Laubach Literacy International simply do not have the capacity to train the numbers of tutors that would really be needed to handle this problem. Right now it is said that our adult basic education education programs are reaching about 4 percent of the population that really needs this particular help.

We see that the proposal could benefit more than the community-based programs. It could benefit college work-study programs as well. IRA conducted a study this last year, for example, when the administration first announced that we were going to use college work-study students in literacy programs, and 6 of the 18 that were going to be doing this were asked how the students would be trained, and one of the responses said we never thought of that and some of the other responses were we are planning to have an intensive program. We really want these people to have a lifelong commitment to training volunteers.

We could consent that that kind of variation suggests the problem, and we see a solution through the use of title I's reauthorization in that we can build a national literacy policy that will give direction and leadership without taking control, because the control would still be in the local communities, but the amount of funding would be relatively small for what could be accomplished.

In the early days of our country it was no shame to be illiterate. For millions of Americans today, however, it is a disgrace and because of this condition they are afraid to come out and say I can't read and write. They are fearful and ignorant of how to change the situation.

Some know, and I talked to your Salvation Army head about 2 weeks ago, and she said we were amazed at Christmas as to how many people came to us and asked us to help write their Christmas cards, and these kinds of things do not come out until there is a personal need. How many of these people know anything about changing the laws regarding their future, and we certainly look to you to help with that.

I appreciate the opportunity to testify. I have enclosed for the subcommittee's review a series of recommendations that I devised as I went through and thought what could be the possibilities for things that could be done. I look forward to answering your questions.

Thank you.

[The prepared statement of Anabel Newman follows:]

PREPARED STATEMENT OF ANABEL NEWMAN, ED.D., ON BEHALF OF THE INTERNATIONAL READING ASSOCIATION

TITLE I

Higher Education Act

Mr. Chairman, members of the House Subcommittee on Postsecondary Education, my name is Anabel Newman, Ed.D. I am a Professor of Education at Indiana University in Bloomington. I have worked with disadvantaged and underachieving learners for over twenty-five years. I represent the International Reading Association on the national Coalition on Literacy. I am here today on behalf of the IRA to present testimony on the reauthorization of Title I, Continuing Postsecondary Education Program and Planning of the Higher Education Act of 1965 as amended.

The International Reading Association is a professional society of over sixty thousand members and 1180 affiliate councils in over thirty countries. Individuals join IRA to further the goals of reading, reading education and literacy. I am here today to discuss how those goals and Title I are compatible.

The testimony is divided into three basic areas: the need, the problem and the solution that the Continuing Postsecondary Education Program and Planning Title could address.

The need

Eradicating illiteracy in the United States is currently hampered by unknowns. Unknown are the number of illiterates in America. In fact a standard, commonly accepted definition of literacy is unknown at this time. What is known are the estimates of illiteracy in the country, estimates ranging from 0.05% to over 30% of the adult population (based on data from UNESCO to that of the Adult Performance Level study of 1974 to estimates used by some advocates). This range is a result of both the definition of literacy and the lack of a systematic enumeration of illiterate Americans. Hopefully, the National Assessment of Education Progress's study of literacy among young Americans will answer some of these questions. Regardless of the disagreement on the number of illiterates and the definition of literacy, there are millions of Americans who cannot read and there are not enough programs or tutors to teach all of these individuals how to read.

The problem

There are many reasons why an adult may not know how to read; many suffer from a handicap, some are non-English speakers, others were neglected or pushed out of school, and some chose not to learn. One of the reasons that our nation has not been able to teach every person to read is that it takes many hours of one-to-one, or small group instruction to raise an illiterate adult's reading skills to at least the fourth grade level. Training effective tutors to instruct these adults takes time, and currently there are not enough tutors to go around. In New York City, during last year's announcement of the advertising campaign sponsored by the Ad Council and the Coalition on Literacy, an assistant to the mayor of the City of New York said that in her city there are thousands of individuals waiting to be taught, and that there are no services available for them. Her concern was to find such tutoring.

A partial solution

One solution to meeting this need for trained tutors might be through our schools of continuing education. These schools offer programs aimed at the non-traditional student. Tutor training programs could be included in these offerings. Such tutor training could be linked with the community based literacy programs and the college work-study students who are working with literacy programs as their work-study activity. Community based programs are commonly administered at the neighborhood level and use volunteer tutors without necessarily receiving government funds.

The continuing education programs could offer instruction to individuals who wish to become volunteer tutors. While some literacy training programs have their own training programs, many do not. The literacy training that could be offered in the schools of continuing education can be offered by professionals with a background in instruction, reading and adult basic education. One example of an institution that would use this concept is Indiana University at Bloomington's School of Continuing Studies. This school believes that federal support for the development of literacy training programs would fit its mission and would be used by the national community.

This proposal could also benefit more than just the community based programs, it could benefit the college work-study program as well. When the administration first announced its program to use college work-study students in literacy programs, IRA conducted a survey of six of the eighteen schools that had been selected for the program. The questions that were asked concerned how the college work-study students would be trained. The responses varied from, "we never thought about that," to "we are planning an intensive program to train the students so that they will want to become life-long tutors of illiterate adults." That is a wide range. IRA believes that a more systematic training program needs to be encouraged.

Title I's reauthorization presents the Congress with a challenge. The challenge is to build a national literacy policy that gives direction and leadership, without taking control. The historic independence of postsecondary institutions, community based literacy programs and other literacy projects needs to be maintained. The history of government directed mass literacy movements is marked with repeated failures because of inflexibility. However, the federal government can make a difference in the development of training programs for tutors.

In the early days of our country it was no shame to be illiterate. For millions of Americans today it is a disgrace. And the tragedy is that this shadow population is ashamed, fearful, and ignorant of how to change the situation. Some know that they can go to the Salvation Army to write their Christmas cards. How many know anything about changing the laws regarding their future?

Thank you for the opportunity to testify. I have enclosed for the subcommittee's review a series of recommendations related to literacy. I look forward to answering your questions.

Specific comments on Title I, Higher Education Act of 1965, as amended (the pagination is from: A Compilation of Federal Education Laws, Volume III—Higher Education as amended through 1984 published by the Committee on Education and Labor).

Page 5 Part B, Sec. 111(3)—A pressing need for the adult new learner is the patient, regular support service often unavailable in school settings. Regular teachers do not have the time to monitor and nurture individual learning in the way it must be developed with adult basic learners. In fact, school experiences are headed in the opposite directions, partially due to the demands of the current reform movement—do more, do it faster. This approach does not work with the illiterate adult student and he or she soon drops out of regular school programs.

Page 5 Part B, Sec. 111(3)—One of the most circular and insidious problems in the federal adult basic education programs is that local programs have sometimes "reinterpreted" the meaning of the federal discretionary grant provisions to cover attainment of GEDs as well as the "underserved" adults at the lower end of the educational scale. Obviously, it is much easier to take learners who may be near GED attainment and move them to their goal than it is to take learners who do not know a letter of the alphabet and have them appear successful in the program. Clearly, with the underfunding of the majority of the adult basic education programs this phenomenon is not surprising, since local programs are funded based on enrollments. Individuals working on GEDs tend to stay with a program longer than those who are not at that level of achievement.

Page 8 Information Services Sec 114(a)—Occupational information will become an even more pressing need as it becomes necessary for people to move from one job to another more often. Many can learn the few words needed to survive in one job. They often do not have the flexibility to move quickly to the vocabulary of another job. Centers are needed to assist in such transitions.

Page 8 Continuing Education Sec. 115(a)(1), (b)(2), and Sec 116(a)(1)—A major problem for many non-traditional students is transportation. There are buses for the elderly to shop and for the young to get to school. Bus passes for the non-traditional, adult basic education student could serve as added incentive to attend classes. Also, mobile units could serve a variety of locations. Communities could be encouraged to form consortiums to develop services.

Page 10 Federal Discretionary Grants Sec. 116(a)(2)—Most libraries are woefully inadequate in providing resources for the adult learner. They need materials which they can read, but they also need resources which are of interest to them. Professionals and volunteers are needed to select, provide direct instruction, and continue to handle library resources.

Page 10 Federal Discretionary Grants Sec. 116(a)(3)—A national network for exchanging resources is needed. Too much money has been spent on developing products which now sit on shelves for want of adequate distribution.

Creative approaches are needed to solving the problem of access—education needs to go to the factories and workplace rather than always asking the worker to come to the place where he may already have failed. Some companies such as the Ford Motor Company are doing this. Volunteers trained in the more formal school setting, could fan out through communities and meet this need.

National diagnostic and treatment data banks are needed. The beginnings of such data banks exist, but they need to be expanded to a wide variety of learners.

Mr. **Ford**. Thank you.

The committee will stand in recess while we are answering the call for a vote on the rule on the Railroad Safety Act.

[Recess.]

Mr. **Hayes** [presiding]. Why don't we have the witnesses take their seats. He will resume our hearing until the chairman returns, who will be here very soon.

The next witness is Mr. C.P. Zachariadis. You pronounce it so I will understand it.

Mr. **Zachariadis**. Zachariadis.

Mr. **Hayes**. All right. Go right ahead.

STATEMENT OF CHRISTOFER P. ZACHARIADIS, EXECUTIVE DIRECTOR, ASSOCIATION FOR COMMUNITY BASED EDUCATION

Mr. **Zachariadis**. I am executive director of the Association for Community Based Education, which is a national organization of educational institutions. Our membership consists of colleges and universities and programs of adult education and community development organizations. Our institutions operate in low-income communities, in both urban and rural areas of the country. They are community based and community controlled, and they are generally quite effective both as educational institutions and as community organizations, particularly among the populations that are not served effective, if at all, by the more traditional institutions.

Title I of the Higher Education Act places a strong emphasis on programs for "adults whose educational needs have been inadequately served," and it recognizes the importance of involving, and I quote, "a wide range of institutions and groups, including community colleges, community-based educational institutions, business, industry, labor and other public and private organizations and institutions."

We urge you to maintain these provisions. Five years ago they were included in the recommendations of a broad coalition of national higher education organizations, and they received strong bipartisan support.

In the 20 years since the enactment of the Higher Education Act, access to higher education has been dramatically expanded. This act is a superb example of this Nation's commitment to equalize opportunity for all its citizens. It has opened doors to many, and has spawned new institutions and programs to serve a new and eager clintele.

But it is now clear that the benefits have not been shared equally by all groups. Those from disadvantaged backgrounds, the poor and those inadequately prepared have mostly found that the door to opportunity leads nowhere. Attrition rates among them are extremely high. And now there are indications that their presence in higher education is diminishing, as high costs are forcing greater numbers of better prepared, middle-class students to choose less expensive public institutions.

Colleges and universities need help to develop effective and meaningful programs for those individuals, both young and old, that they are not serving well now. Title I is the only place in the act where such programs can be supported. The need exists, it is immediate and it is urgent.

Our recommendations that were submitted last April call for partnerships between these institutions and community-based organizations which have strong ties to poor communities, in order to establish workable programs. The experience of our member institutions which have those ties, both the accredited colleges and the less formal education programs for adults, is that attrition rates can be reduced significantly and a wide range of new and productive relationships can be established between the educational institution and the community.

We also recommend very strongly that you maintain the current eligibility provisions in title I which allow for a wide range of providers to particpate in these efforts. Many institutions that do not now meet the eligibility provisions of section 481(a) and 1201(a) are successfully providing quality education to underprepared individuals. The outstanding performance of many of these organizations in projects supported by the Fund for the Improvement of Postsecondary Education and private donors is a clear indication of their potential.

Finally, we propose the encouragement and support of programs that will involve the educational institution in development programs in poor communities. Our experience is that educational institutions can contribute in significant ways to local development, particularly in low-income areas. Within our membership there are numerous examples of colleges and other local programs catalyzing economic development through the creation of new employment or the establishment of new businesses. This provision parallels somewhat title XI of the act, but it seeks to involve the broader range of institutions and emphasizes the establishment of partnerships between the educational institution and the community. It aims at the development of local leadership and local capabilities to initiate and sustain economic development.

Thank you. I will be happy to answer questions.

Mr. **Hayes**. Thank you very much.

I understand Mr. Yzaguirre is not here, but you let us know who you are. Present your testimony.

STATEMENT OF LORI S. ORUM FOR RAUL YZAGUIRRE, PRESIDENT, NATIONAL COUNCIL OF LA RAZA ON BEHALF OF THE HISPANIC HIGHER EDUCATION COALITION

Ms. **Orum**. My name is Lori Orum, and I am the senior education policy analyst at the National Council of La Raza. I am here representing Raul Yzaguirre, our president, who planned to be here and unfortunately was called away. I am also here on behalf of the Hispanic High Education Coalition, an organization comprised of 14 national Hispanic organizations, and I would like to present our recommendations on title I.

Mr. **Hayes**. You may proceed.

Ms. **Orum**. We believe Congress in its wisdom acted to direct the available Federal resources in education to students with the greatest need, and title I in its 1980 form would not have served those students. The Department of Education studies have shown that students participating in traditional continuing education programs tend to have a higher income and more education and are more likely to be employed and hold a professional or managerial job than the general population.

As long as title I remains a largely untargeted program, serving people who probably do not need federal assistance to upgrade their education and employment skills, we believe Congress should not divert scarce resources to make monies available for this title.

However, we believe for certain disadvantaged populations there is a significant need for continuing education programs at the postsecondary level. This is particularly true among the adult Hispanic population.

Hispanic Americans are the most rapidly growing subpopulation in our Nation, as other witnesses noted today, and among the least educated of all Americans. Hispanics are less likely to be eligible to participate in this system in the first place, with higher dropout rates and lower incidence of enrollment in academically oriented higher curricula than other groups of students. Approximately half of Mexican-American and Puerto Rican youth do not finish high school. Only 26 percent of Hispanic high school seniors are enrolled in a college preparatory curriculum as compared to 39 percent of whites, 32 percent of blacks and 52 percent of Asians. Thus, three out of four Hispanic high school seniors have not had adequate educational preparation to enroll in our colleges and universities.

Among Hispanics who earn high school diplomas, about half never go to college. Even those who have graduated from high school with a college preparatory course of study are less likely than white students to be eligible and competitive for admission to 4-year colleges and universities. For example, in California where the State operates both the University of California system and the California State University systems, only a small minority of Hispanic high school graduates are even eligible to apply for admission to either system. According to the California Postsecondary

Education Commission, while 15.5 percent of white California high school graduates meet the eligibility creiteria for the UC system, only 4.9 percent of Hispanic graduates meet the criteria. In the CSU system, which has somewhat lower entrance requirements, 33.5 percent of white graduates are eligibile to apply compared to only 15.3 percent of Hispanic graduates. For these reasons we believe that for Hispanic adults the postsecondary system does not meet their needs.

The national studies have shown Hispanic Americans are also more likely to suffer from functional or marginal illiteracy than are other groups of Americans. As the public is increasingly aware, possession of a high school diploma does not necessarily connote literacy at a sufficient level to participate in the traditional postsecondary education system. When literacy is defined by such practical criteria as ability to interpret a bus schedule, address a letter so that it reaches its destination or read an explanation of finance charges from a bank, which is far less than the level of literacy needed to succeed in postsecondary education, research studies indicate that 56 percent of Hispanic Americans could be considered functionally illiterate, and that's in comparison with 47 percent of blacks and 16 percent of whites.

In additional to poor academic preparation at the elementary and secondary levels, limited financial resources also play a role in restricting Hispanic access to postsecondary education. Hispanics are more likely than the average American to be poor. Hispanic Americans earn less per hour than any other group, and nearly 30 percent of Hispanic families live below the Federal poverty level. Also Hispanics are more likely than other groups to participate in higher education on a part-time basis, and most Hispanics attending college are enrolled in low cost 2-year institutions. Fully 54 percent of Hispanics in higher education programs are enrolled in 2-year colleges, compared to 36 percent of whites and 43 percent of blacks

Attrition rates for Hispanics throughout the traditional postsecondary system are high. While 61 percent of white youth entering college earn degrees, only 32 percent of Mexican-Americans and 28 percent of Puerto Ricans finish college.

Low levels of education and marginal English literacy continue to retard the earing potential of Hispanic adults. In fact, limited education and language difficulties have been shown to be two of the most significant barriers to productive employment for Hispanics.

In order that title I may begin to address the very real continuing education needs of Hispanic adults, the National Council of La Raza and the Hispanic Higher Education Coalition recommend that the subcommittee consider the following changes in the legislation.

We do favor continuing Federal assistance to institutions in providing continuing education, but we believe such assistance should be targeted to programs that serve individuals who are most underrepresented in traditional postsecondary education programs. We believe these include adults who have been inadequately served by the education system during youth, those whose access to postsecondary education has been severely limitred and those who have suffered barriers due to age, sex, age, handicap or national origin.

It also recommends you include a study within title I which would evaluate the extent to which race, language, sex or age represent barriers to participation in the traditional postsecondary education system. The study should also review the availability and effectiveness of outreach, information or supportive services programs in encouraging participation in continuing postsecondary education.

Number three, we include as eligible grantees for such funds community-based organizations and community-based educational institutions.

Four, we recommend that you limit Federal discretionary grants to institutions of higher education which apply jointly with community-based organizations or community-based education institutions to operate cooperative programs.

Number five, that you include as allowable purposes of such grants the provision of preservice training to teachers and administrative personnel involved in child care programs, including the recruitment and training of low-income parents in early childhood education and the development of programs to assist such individuals in becoming certified home child care providers.

Number six, that included as allowable purposes of such grants be the provision of training programs for volunteers and college work-study students to work in literacy projects and other community-based educational programs.

As an aside, I would urge the committee in its deliberations on other titles of the act to consider ways in which work study and cooperative education students can be encouraged to contribute more effectively to community-based education programs, especially those that are targeted at improving literacy of Hispanic adults.

I just recently became aware of one example of the excellent results that this kind of collaboration can bring. The University of Southern California has made available a number of its work-student students to work in partnership with an Hispanic community-based organization in Los Angeles to provide tutoring services to low-achieving students. This organization, Desarol lo Estudiantil Hispano, coordinates the services, and parents pay for tutoring on a sliding pay scale. This partnership has helped several hundred Hispanic youth, and I have seen the report cards from the children. In a 3-month period they go from failing and "D" grades to "A's" and "B's". There is such a demand for this tutoring that they have a significant backlog. Work study and cooperative education students represent a tremendous resource in community education projects serving adults as well. A Federal continuing education grant to a university or college and a community-based organization engaged in such an endeavor could go a long way in encouraging more of these partnerships.

In closing, let me reiterate that title I should not remain an untargeted program, either in terms of the students to be served or the types of institutions to receive Federal support. There is a tremendous need for continuing education programs among Hispanic adults, especially when targeted to marginally illiterate adults, and they will be most effective when operated through or in partnership with community-based organizations which typically have much better outreach, information and support services in disadvantaged communities than do institutions of higher education operating alone.

Thank you very much.

[The prepared statement of Lori S. Orum follows:]

PREPARED STATEMENT OF LORI S. ORUM, SENIOR EDUCATION POLICY ANALYST FOR RAUL YZAGUIRRE, PRESIDENT, NATIONAL COUNCIL OF LA RAZA ON BEHALF OF THE HISPANIC HIGHER EDUCATION COALITION

Mr. Chairman, members of the Subcommittee, my name is Lori S. Orum, and I am the Senior Education Policy Analyst at the National Council of La Raza. I am here representing Raul Yzaguirre, President of the National Council of La Raza, one of the nation's largest Hispanic policy analysis and technical assistance organizations. I am also here on behalf of the Hispanic Higher Education Coalition—an organization comprised of 14 national Hispanic organizations dedicated to improving postsecondary educational opportunities for Americans of Hispanic descent. I appreciate the opportunity to come before you today and share with you our recommendations for the improvement of Title I of the Higher Education Act.

As this Committee is well aware, Title I, which supports efforts to provide continuing education opportunities for adult learners, has not been funded for the last several years. When Congress acted in 1981 to reduce government spending, funding for Title I was eliminated. Congress in its wisdom acted to direct the available federal resources in education to students with the greatest need, and Title I in its 1980 form would not have served such students. Department of Education studies have shown that students participating in traditional continuing education programs tend to have a higher income and more education—and are more likely to be employed and hold a professional or managerial job—than the general population.

Since most of these students will have access to continuing education without federal intervention, we concur with the Congressional Research Service's assessment of the current programs authorized by Title I that "the appropriate and justifiable Federal role is unclear." As long as Title I remains a largely untargeted program, serving students who probably do not need federal assistance to upgrade their education and employment skills, Congress should not divert scarce funds to make monies available for this title.

However, the National Council of La Raza and the Hispanic Higher Education Coalition do believe that, for certain disadvantaged groups, there is a significant national need for continuing education programs at the postsecondary level. This is particularly true among the adult Hispanic population.

Hispanic Americans, the most rapidly growing subpopulation in our nation, are among the least educated of all Americans. Hispanics are less likely than Blacks or Whites to participate in and graduate from the traditional postsecondary educational system. Hispanics are less likely to be eligible to participate in this system—with higher dropout rates and lower incidence of enrollment in academically-oriented high school curricula than other groups of students. National data indicate that approximately half of Mexican American and Puerto Rican youth do not finish high school. Only 26% of Hispanic high school seniors are enrolled in a college preparatory curriculum as compared to 39% of Whites, 32% of Blacks and 52% of Asians. Thus, three out of four Hispanic high school graduates have not had adequate educational preparation to enroll in our colleges and universities.

Among Hispanics who earn high school diplomas, about half never go to college. Even those who have graduated from high school with a college-preparatory course of study are less likely than White students to be eligible and competitive for admission to four-year colleges and universities. For example, in California, where the state operates both the University of California (UC) system and the California State University (CSU) systems, only a small minority of Hispanic high school graduates are eligible to apply for admission to either system. According to the California Postsecondary Education Commission, while 15.5% of White California high school graduates meet the eligibility criteria for the UC system, only 4.9% of Hispanic graduates meet these admission guidelines. In the CSU system, which has somewhat lower entrance requirements, 33.5% of White graduates meet the admission guidelines, compared to only 15.3% of Hispanic graduates.

Research also indicates that Hispanic Americans are also more likely to suffer from functional or marginal illiteracy than are other groups of Americans. As the public is increasingly aware, possession of a high school diploma does not necessarily connote literacy at a sufficient level to participate in the traditional postsecondary education system. When literacy is defined by such practical criteria as ability to interpret a bus schedule, address a letter so that it reaches its destination, or read an explanation of finance charges from a bank—which is far less than the level of literacy needed to succeed in postsecondary education—research indicates that 56% of Hispanic Americans could be considered functionally illiterate, in comparison with 47% of Blacks, and 16% of Whites.

In addition to poor academic preparation at the elementary and secondary levels, limited financial resources also play a role in restricting Hispanic access to traditional postsecondary institutions. Hispanics are more likely than the "average American" to be poor. Hispanic Americans earn less per hour than any other group, and nearly 30% of Hispanic families live below the federal poverty level.

Hispanics are more likely than other groups to participate in higher education on a part-time basis, and most Hispanics attending college are enrolled in low-cost two-year colleges. Fully 54% of Hispanics pursuing higher education in 1980 were enrolled in two-year colleges, compared to 36% of Whites and 43% of Blacks. Although some students do transfer to four-year institutions and complete bachelor's degrees, students in four-year institutions are more than twice as likely to complete a bachelor's degree within nine years as are students who begin their education in two-year colleges.

Attrition rates for Hispanics throughout the traditional postsecondary system are high. While 61% of White youth entering college earn degrees, only 32% of Mexican Americans and 29% of Puerto Ricans finish college. Blacks are the only group less likely than Hispanics to complete college. Only 42% of Black students who enter college earn degrees.

Due to poor academic preparation, marginal levels of literacy, and lack of financial resources for full-time attendance at four-year colleges and universities, a large proportion of Hispanic adults find that traditional postsecondary education system does not meet their needs. As national studies have shown, low levels of education and marginal English literacy continue to retard the earning potential of Hispanic adults. In fact, limited education and language difficulties have been shown to be two of the most significant barriers to productive employment for Hispanics.

In order that Title I may begin to address the very continuing education needs of Hispanic adults, the National Council of La Raza and the Hispanic Higher Education Coalition recommend that the Subcommittee consider the following changes in the legislation:

1. Provide federal assistance to institutions in providing continuing education, but target such assistance to programs which serve individuals who are among the most underrepresented in traditional postsecondary education programs. These include adults who have been adequately served by the educational system during youth, those whose access to postsecondary education has been severely limited, and those who have suffered barriers due to age, sex, race, handicap or national origin.

2. Include a study within Title I to evaluate the extent to which race, language, sex or age represent barriers to participation in postsecondary education. The study should also review the availability and effectiveness of outreach, information, or supportive services programs in encouraging participation in continuing postsecondary education, with particular attention to programs serving adults such as homemakers, retirees, or individuals with limited-English proficiency.

3. Include as eligible grantees for such funds, community-based organizations and community-based education institutions.

4. Limit federal discretionary grants to institutions of higher education to those institutions which apply jointly with community-based organizations or community-based education institutions to operate cooperative programs.

5. Include as allowable purposes of such grants the provision of preservice training to teachers and administrative personnel involved in child care programs, including the recruitment and training of low-income parents in early childhood education, and the development of programs to assist such individuals in becoming certified home child care providers.

6. Include as allowable purposes of such grants the provision of training programs for volunteers and college work-study students to work in literacy projects and other community-based educational programs.

As an aside, the National Council of La Raza and the Hispanic Higher Education Coalition urge that the Subcommittee, in its deliberations on other titles of this Act, consider ways in which work-study and cooperative education students can be encouraged to contribute more effectively to community-based education programs, especially those involved in improving the literacy of limited-English proficient adults. I have recently become aware of one example of the excellent results this type of collaboration can bring. The University of Southern California has made a number of its work-study students available to work in partnership with an Hispanic community-based organization in Los Angeles to provide tutoring services to low-achieving students. The organization, Desarollo Estudiantil Hispano, coordinates the services, and parents pay for tutoring on a sliding fee scale. This partnership has helped several hundred Hispanic students improve their academic performance dramatically. There is such demand for this tutoring that the organization has a large waiting list. Work-study and cooperative education students represent a tremendous resource in community education projects serving adults as well. A federal continuing education grant to a university or college and a community-based organization engaged in such an endeavor could go a long way in encouraging more of these partnerships.

In closing, let me reiterate that Title I should not remain an untargeted program, either in terms of the students to be served or the type of institutions to receive federal support. There is a tremendous need for continuing education programs among Hispanic adults, to help them become fully literate and remedy the deficits of education programs which did not prepare them for higher education, to provide them opportunities on a part-time basis to gain certification for a variety of fields and licenses, and to enable them to gain skills which will help them advance out of low-paying, dead-end jobs. These programs, especially when targeted to marginally literate adults, will be most effective when operated through or in partnership with community-based organizations which typically have much better outreach, information and support services in disadvantaged communities than do institutions of higher education operating alone.

Thank you for your consideration of these recommendations.

Mr. FORD [presiding]. Donald McNeil.

STATEMENT OF DONALD R. McNEIL, PROVOST, AMERICAN OPEN UNIVERSITY, NEW YORK INSTITUTE OF TECHNOLOGY

Mr. McNEIL. Mr. Ford and members of the committee, I am here on behalf of the New York Institute of Technology. I am provost of the American Open University division of that institution; and you may recall, Mr. Ford, giving the kickoff speech 4 or 5 years ago as we launched a plan for an American Open University that was designed to reach adult students who face certain barriers in getting a college degree. It is in this behalf of distance learning, as we now call it, rather than correspondence study, which is the old phrase, but the distance learning program of New York Tech and of the 69 institutions in NUCEA and something like 2½ million students that the Home Study Council serves.

My testimony is based on certain assumptions that deal with the barriers that face adults who want a college degree, the barriers of circumstance, those over which they have no control, where they have house, home responsibilities, handicapped by the distance from an institution, the wherewithal and so on, the personal circumstances which have to do with motivation, perseverance and all of the requirements, fear sometimes, that adults need to get a college degree or get the training that they need.

But the most important one I found over the last 25 years is the institutional barriers that have been erected that either inadvertently or on purpose handicap an adult student from going back to college. Even the independent study courses that are offered in the 69 institutions in NUCEA often do not add up to a degree. So the unavailability of the required courses, the unavailability of the courses at the time and place that the student needs it, are barriers that just become insuperable to the adult who wants a college degree.

We think that technology is that new link for reaching those students in a different and exciting way. We certainly approve of the use of telecourses and audiotapes and all of the other means of technology, but it certainly is my view that the future rests on how we use that computer in the educational process.

In my statement, I take a typical female student through the process that we use at New York Tech, which is called computer conferencing, and I guess I am one of those, Mr. Ford, over 30, who finally mastered the computer and so I know something about how it is used in the educational process; and from what we gather from the first 2 years of using that computer is that it is extremely effective.

Here is how it works. We have a computer conferencing system. When a student enrolls in a course he is given the necessary reading materials, syllabi, the textbooks, which are mailed to that student. The student then has to have access to a computer, a minicomputer. When that student gets a password from our computer in Old Westbury, they are then signed on and become a member of that class, and all of the students, regardless of where they are in the country, are members of that class—and let us just say because I am a historian—History 101. They then can literally talk to each other at the time and place that they want to. They dial a local number, they get access to type in their password, they have access to the computer and a list of their in messages, in-box messages, are available to them. They then read through their messages and respond in typewritten form to the professor, and all the messages go to all of the students.

What we are approaching then is something close to a socialization process as the students and the professor begin to converse back and forth. Unlike correspondence, which deals with the mail, it is very quick and it is responsive. They are able to get back to each other within 24 hours. If you want to do the work at 11 o'clock at night, you can type it in and the professor has 48 hours to respond to that particular student's question.

There is a branching system whereby the professor can assign different people to different topics, and they can talk among themselves in a conference. The notes are all numbered and labeled so that they are easily retrievable and unlike an electronic mailbox, and by using the local telenet, the local number, dialing that local number, there is no further charge to the student.

What we are finding is that the computer rather than being insensitive and inhuman and cold and putting off—we are finding that the computer has made the relationship between the teacher and the instructor quite intimate and quite friendly. The whole system is user friendly because in—there is a variety of systems, and I gather, Mr. Ford, you ran into the more complicated ones in your computers, because they now have user friendly systems whereby they can tell you by menu pretty much what you ought to do and you make a choice whether you have to write or create or send a message or whatever.

And these students then find that they can—within 2 weeks, we have had no trouble with the students mastering the computer.

Well, this raises certain questions, using the computer as a communications device rather than a computer where you interact with a block of knowledge, which is the customary use of a computer. If you are going to talk back and forth between the teacher and between the students themselves wherever they are, and this can be used in the classroom too, it raises a question of, how do you get access to a computer? What we are finding is that a lot of our students, while they take our courses by mail, would prefer to take them with this quick and effective means of the computer, which means that something has to be done in this country about making computer access a reality to everyone. There are a lot of gifts to school districts, there are a lot of gifts by corporations, but still we find that it is beginning to create a second-class citizenship among a lot of people who do not have access to that computer.

We think that the Congress ought to look at the possibility of some kind of matching moneys for libraries and institutions that would make it available, would make the computer available and the hardware available to adults at a time and place that they want. The adults that failed to get a college education or failed to get the training are really handicapped by those two things: time and distance. The computer can solve them.

In addition, we feel that there are tremendous development costs in preparing the distance learning packages that are needed for the adult studying at a distance, and some help along that line, at least experimentally, would be advisable.

This last summer, I spent a week with 18 teachers on Long Island taking a computer literacy course, and this was to make teachers who had no knowledge of a computer at least computer literate to the point that they could understand what their students were talking about, and it was a really great revelation to find that in short week's time that we could, indeed, become computer literate and know how to operate the computer, what the kids were talking about.

We take that same problem and apply it nationwide to the 3½ million teachers; that is a debatable figure, I guess, but they estimate that 3 million of these teachers are not computer literate at all. In addition, almost every school district now is trying to train computer specialists who can train other teachers in that process.

We think, and are developing now, that the distance learning idea of teaching that computer via computer is the way to go, and I cite the figures in the paper of NSF in their handling of typical summer institutes at $5,000 per teacher which adds up to a total cost of roughly somewhere around 15, say 12 or 15 billion, if you do it for everyone.

This is a much more inexpensive and it is a much more effective way, we feel, and I would add only one thing and that is that this distance learning process is not for everyone. It takes a certain amount of discipline, perseverance that students often find they get from an association in person across the table. The comments that come back to you from your students are that it is much more effective, that we have more to do with the professors themselves, that it is not as impersonal as standing up and lecturing to 50 or 100 students and then never having or having very little access to the teacher.

Thank you very much.

[The prepared statement of Donald R. McNeil follows:]

PREPARED STATEMENT OF DONALD R. MCNEIL, PROVOST, AMERICAN OPEN UNIVERSITY, NEW YORK INSTITUTE OF TECHNOLOGY

Congressman Ford, members of the Subcommittee. I am Donald R. McNeil, Provost of the American Open University of New York Institute of Technology. I speak to you today of the role of technology in reaching the educationally disenfranchised.

By educationally disenfranchised, I mean all those adults who are unable, for one reason or another, to complete a college degree.

Adults customarily face barriers that can be characterized in three categories: Barriers of circumstance, personal barriers, and institutional barriers.

Barriers of circumstance generally refer to situations over which the adult learner has little control: job requirements, responsibilities as a homemaker, time available, access to transportation, geographic location, and financial wherewithal.

Personal barriers include physical handicaps, lack of self-confidence, persistence, and motivation.

Institutional barriers are the product of institutional policies designed to serve the needs of a younger, largely resident student body. For the older learner, these obstacles frequently are frustrating and discouraging. Admission policies, credit transfer decisions, residency requirements, scheduling of classes, and modes of instruction are examples of institutional characteristics which may pose insurmountable barriers to the adult learner.

These adult learners are a diversified lot: autonomous learners, people with work and family obligations, people who need credentialing for non-formal learning, people who are geographically mobile and those who are home or institution bound, people whose first language is not English, people seeking highly technical skills in emerging industries, those desiring to change careers, and people who are seeking upward mobility.

I should like to distinguish between two types of adult students: first, there are those who are able to come on to a campus, become a regular student and move through the curriculum toward a degree; second, there are those students whose only hope for a college degree is to take the bulk of their work in the distance learning mode.

And distance learning means finding new methods and means of communications between the student and the professor.

Technology can provide that link.

The use of technology—telecourses, audio tapes, computer aided instruction, and combinations of all these—can be valuable supplements to on-campus and off-campus offerings and I would certainly support their use for those purposes.

But given the numerous barriers that adult learners face, distance education is the only access to higher education that many of them will ever have. Technology promises to transform distance learning from the old fashioned correspondence mode to an exciting new system of direct, quick and cost effective communications between students and teachers that enhances learning, improves motivation and sustains the quality of instruction.

While the mails, the mass media, and the telephone are integral parts of the communications system, the real focus in the future, in my view, will center on the computer.

There are many educational uses for the computer and many institutions are experimenting with computer assisted instruction and pre-programmed materials where the learner interacts with blocks of information.

But no use of the computer is more exciting than the system we use with our students in New York Institute of Technology—computer conferencing.

Here is how it works for a typical female student. After the student enrolls and receives the Course Learning Package through the mail, she is given access to the computer conferencing system on our mainframe computer in Old Westbury, New York. The professor and all students in the course have their own access. The student selects her own password for access to the mainframe. When she communicates in this system, she dials a local telephone number, called Telenet, which connects her with the mainframe computer. The professor types in the first note (usually telling something about his or her background, and stating how the course will operate with the computer conferencing system). The professor then transmits the message to the mainframe computer where it rests in the electronic mailbox until the student "reads" her messages in the "In-box," which appears on her screen when she signs on. The student then replies at her convenience and that message can go either directly to the professor alone or to all students in the course.

All messages in the conference are numbered enabling a student enrolling later in the course to go back and read all the messages that have been exchanged between the professor and the students. A simple set of commands after every message enables both the professor and student to read, send, print, or write a message, or to seek help.

Our communications software has a branching system which enables the professor to divide the class into sections to address major issues, create debates, and encourage small group discussions by computer. Students may address their messages to the group at large, to individual students, or to the professor alone.

The computer conferencing system is independent of location and time. The professor and the students each answer the others from where they are and on their own time.

Computer conferencing has some obvious advantages over electronic mail. Messages can easily be retrieved. There is a permanent record of all discussions in numbered sequence. It tends to be much more informal, yet guarantees privacy. Messages can be sent to a number of people (everyone in the conference) without addressing them individually. It is user friendly and extremely supportive of the student. And after the first week or two, computer conferencing begins to approach the socialization process one gets from being in a classroom.

Rather than being an inhumane, insensitive and cold instrument of communication, the computer, when used as a true interactive agent between professor and students, creates a sense of intimacy, friendliness, and cooperation. It's a system that can be used in conjunction with any distance learning operation including telecourses.

Here are some interesting figures from our early evaluation of courses taught with the computer conferencing system. Of our first 200 students we had an 85% completion rate despite the fact that 75% of the students had no computer experience. They spent about an hour and a half on the computer each week, though some went way beyond that in their enthusiasm.

We asked their reaction to this new method and 96% said they would take another course using computer conferencing. 86% "talked" to other students in the course. 78% of the professors' messages, and 90% of the students' messages relate to course content.

In addition to this interactive instruction, we also use computer conferencing for administrative purposes, for counselling purposes, and for library research.

Computer conferencing promises to change the entire focus of distance learning. Exchanges have become quick, dependable, and a cost effective means of reaching adult learners handicapped by time, distance, location, or personal situation.

What can the Congress do to help us to meet these new challenges of technology?

The most adverse consequence of the expansion of technology in education is that it increases the disparity of riches between the haves and the have nots.

The explosion of interest in purchasing VCR's and computers still leaves huge segments of society without the hardware to take advantage of all the delights and benefits of a technological age.

As the computerization of society continues, there is a danger that we shall inadvertently create a divided society—those who will be armed with technological know-how and able to fit into the society of the future, and those who will not have the resources or the knowledge to be successful in the new technological society. The danger of elitism is aggravated by the technological revolution.

Therefore, the federal role may be to find means of encouraging—possibly through matching funds—the purchase of hardware for libraries and schools throughout the nation. Anyone, regardless of economic status, should have access to the hardware for receiving video, audio, or written messages, just as most citizens are now within the range of a library that can furnish them with vast collections of books. A number of our students who take our courses by mail have expressed the wish that they could have access to a computer and modem at a local school or library. An alternative might be matching funds for students to buy their own computers—a new form of student aid.

Second, the need for educational software is monumental. Utilizing technology often changes the nature of the learning experience. Material is presented in different formats and time periods. Knowledge often needs to be broken down in different ways for presentation by these new technological methods. The integration of technology with the printed work—still the predominant element in the learning process—requires new approaches and new attitudes that deserve federal help.

Funds are needed also to develop the course learning packages, the basic materials required to teach at a distance.

Third, a relatively small program to encourage experimentation with the use of the computer for education would enable a number of schools and colleges to develop programs and approaches that, when proven successful, could be replicated throughout the country. While some federal programs such as Title III have allowed partial funding of computers as part of the curriculum perhaps that program could be expanded to include the use of computers for distance learning.

Fourth, a specific program devoted entirely to the improvement, advancement, and expansion of distance learning using the new technologies, would help reach those millions of educationally disenfranchised who remain our concern.

Of course, we assume that any barriers in present federal student aid programs to users of these technologies should be removed.

There is another huge group that would benefit from expanded distance learning programs which utilize technologies—namely, teachers. There is a basic need at every level throughout the educational world for computer literate teachers and computer experts within each school and college system. If teachers and faculty are computer ignorant then that will have a negative impact on students. The National Science Foundation pays approximately $5,000 for every teacher trained in computers at Summer Institutes. Multiply that amount by the 3 million teachers estimated to be computer illiterate and you have a $15 billion cost. More than cost, though, there is a problem of finding the expertise. If 100 teachers are trained in each Institute, we would need 6,000 institutes per year for five years to make all teachers computer literate. And it would take 18,000 experts to teach them. Money spent to train the experts to teach the teachers—through the distance learning mode—would be extremely cost effective.

Technology is moving very rapidly into areas unforeseen only a decade ago. Yet education often has lagged behind in adopting these new technologies. Limited federal support for experimentation, making the technologies available, and training teachers, would equalize opportunities for millions of Americans.

Mr. Ford. Thank you very much.

Ms. Orum, did I hear you say you thought we should fund community-based organizations to work with the colleges or just to encourage the colleges to work with the community-based organizations?

Ms. Orum. The continuing education grants made to universities who are working in cooperation with the community-based organizations to provide training for students and personnel who would be working in literacy and community-based education projects.

Mr. Ford. You are not suggesting that the community-based organization be eligible for a grant?

Ms. Orum. Yes; I was suggesting they should also be eligible grantees for funding to provide continuing education services.

Mr. Ford. What is your definition of a community-based organization?

Ms. Orum. Nonprofit community-based organization for and controlled by members of the community by its mission to serve low-income disadvantaged adults and provide educational services.

Mr. Ford. The church?

Ms. Orum. I am aware of difficulties of providing Federal funds for religious organizations.

Mr. Ford. That is not the question at all. It is a question of something that broadens your suggestion. I have absolutely no problem with encouraging educational institutions to utilize—and I think that they are doing better at it all the time—the resources of the community-based organizations.

What I have real problems about is financing the existence of a community-based organization for that purpose. We cannot even finance the educational institutions we have now.

Ms. Orum. I am certainly not intending to imply that Federal funds should be used to start or perpetuate an organization which would not otherwise be there. I am suggesting that title I funds might be appropriately used to provide add-on services that would serve a continuing education purpose to an organization that is already providing work with disadvantaged adults who are not seeking an education through the traditional system.

Mr. **Ford**. My second question is you put a low percentage on Hispanics who graduate from college. As you probably know, I have worked with the migrant education program since I helped it get started in 1960. Of those children that we get into the program, less than 10 percent of them finish high school and a very small percentage of them go on to college. We have another small program called APENCAMP dealing with basically that same population which has been extremely successful but very small. It is very difficult to get money for it.

But how does the emphasis you put on obtaining a certificate or degree square with what I think you are describing when you talk about community-based organizations that are working with people who are economically handicapped in some fashion in a more general sense? Is that something they really can devote a lot of their resources to, trying to get somebody beyond putting them in touch with a TRIO program? For example, would your organization, for example, think of TRIO as one of the first places to go?

Ms. **Orum**. Of course. TRIO does an excellent job, especially with some of the younger students. My comments, I think, were more directed to the bulk of the Hispanic adult population which either dropped out at some point and might go back and get an GED or equivalency certificate or that group of people, half of them that stay to graduate, 75 percent that go through on a general vocational track that really does not provide them with the academic preparation to go in the traditional system.

One of the witnesses that was here before talked about his program in northern Colorado, saying they had offered even one course in the community which was enough to build the self-esteem and the experience of the student to start going back to the traditional system. I am not suggesting we start a parallel system. I am suggesting these organizations would provide an effective link for those students who would not normally seek links for that student to enter the system.

Mr. **Ford**. You used the California figures and a very low percentage of Hispanics going on through that system after completing high school. You mentioned even after they graduated.

Ms. **Orum**. That are eligible to apply, yes.

Mr. **Ford**. The chancellor of that system has indicated to us one of the principal problems involved is that a very substantial number of these students are undocumented when they finish high school, and the present Federal statutes require that you be a citizen or a permanent resident.

Ms. **Orum**. The data I was citing from, the California Postsecondary Education Commission, simply dealt with students who had graduated from high school and looked at their grade point average and their test scores to determine whether they were eligible.

Mr. **Ford**. You can be a graduate from high school in Los Angeles with a 4.0 average and you cannot get nickel one because your father and mother brought you here as a child illegally. What impact does that have on your numbers in the California system?

Ms. ORUM. I do not think even the California system knows that. That was not data that was reported.

Mr. FORD. They determined some potential for it because they testified before this committee that we should enlarge the definition of eligibility to permit a graduate of an American high school with or without permanent legal residence status to participate in the program, pointing out that their classmates can go on to UCLA but they cannot. Have you talked with them at all?

Ms. ORUM. I have not spoken with them. I am aware that there is litigation pending in California on that very topic.

Mr. FORD. I know that the university people are concerned and Reynolds has been actively pursuing this here, but the way she described it, it is a very substantial and important phenomena, particularly in the Los Angeles area.

Ms. ORUM. That would surprise me simply because the available data I have seen on high school completion indicates if you were born outside the United States you have a much lower likelihood of ever completing high school to begin with, so I would be quite surprised to find in the number of people who are graduating from high school with college preparatory curriculum that there are a high percentage of undocumented folks in that group. But, again, I think there is very little data available on undocumented people to begin with, and certainly there is very little data on Hispanic high school completion. Some of that stuff has just become available in the last few years.

Mr. FORD. They are apparently able to extrapolate from the people who have been denied solely because of that characteristic to come up with a substantial figure. We do not know what it is that is based on or what it is with other groups of undocumented temporary/permanent residents in the country. Not all of them are Hispanic who face the same problem. In Rhode Island they found they are Canadian.

Mr. Hayes.

Mr. HAYES. Thank you, Mr. Chairman.

I was following with interest your inquiry into the testimony dealing with the California situation in terms of the statistics there, which are somewhat curious, but I think the witness indicated she could not answer that.

There is one other thing I would like to know. Maybe you have it in your conclusions. You say, "let me reiterate that title I should not remain an untargeted program, either in terms of the students to be served or the type of institutions to receive Federal support."

Now, could you elaborate on that? What do you want to do?

Ms. ORUM. As I was trying to suggest, if there are limited Federal resources to be allocated for this title, they should be most appropriately targeted to the group of students that have the least representation in the traditional postsecondary education, those who have been underserved during youth, those that face barriers of discrimination due to age, race, sex, national origin, handicap. In terms of institutions, targeted to the institutions who work in partnership with community organizations dedicated to serving those individuals, not that they become funds that support institutions that do not work with the most severely disadvantaged students.

Mr. **Hayes**. You are saying currently respond to, not specifically in title I——

Ms. **Orum**. There is nothing I can see in the existing statute that would target those funds to the neediest students.

Mr. **Hayes**. Do the other members of the panel agree with that?

Mr. **Zachariadis**. Yes, we would very strongly. As a matter of fact, if I can take a minute to respond to the question, Mr. Chairman, community based organizations or community based educational institutions are at present eligible under the provisions for the fund for the improvement of postsecondary education, and the experience of that program is one where these organizations have done an outstanding job in serving underserved populations. Truly outstanding program. Some of their more successful projects have been among those groups.

So the issue of eligibility really ought not to be one that is a major problem. These problems have received and handled and implemented programs with federal support very responsively and very well.

The second issue relates to the extent to which underserved populations actually are being served in established institutions. The history is that since the implementation of the act that they have not done their work. Attrition rates among these populations are very, very high. The job is not being done, and the programs that are most successful are the ones that link the institutional program to the community organization that has the links in the community that provide the familiar environment and can provide supportive services that are meaningful to those people.

So I would urge you very strongly that you look at that issue. It is very easy to deal from the legislative point of view with a piece of legislation that very neatly and clearly says eligibility is to those institutions that we know, those 1201(a)'s and 481(a)'s, those institutions because they are out there and we have invested major national resources to do the job of education. Therefore, we are continuing to support them.

But if the purpose of legislation, the purpose of this program, is to provide meaningful education to people who are now not receiving it, then we ought to look at how effective this kind of legislation and this kind of program would be; and I think the experience is very clear that the link with the community based organization creating a familiar environment or creating community based support, support services for those students, can significanly increase success.

Mr. **Ford**. You used the example of success in FIPSE in postsecondary education of $12 million having been spent in the year. How much of it is being spent with the organization you described as being so successful?

Mr. **Zachariadis**. I do not know what the figures are for recent years, but the past earlier years of the fund, about ten percent or so of their funds were used for what they called risky type of grants, which many of them went to community based organizations. I do not know what the exact figures are now.

Another example in terms of types of money that is needed, Mr. Chairman, my organization has a small minigrant program that provides anywhere between $500 to $5,000 for targeted support to build up an institution or to develop exemplary practices and demonstrate them, and we have found targeted support like that in small amounts can help tremendously an organization like that which is contrasted to the type of moneys that are needed to do a parallel program in an institution that has major fixed costs, major overhead costs. So there is a cost effectiveness issue as well that can be looked at.

Mr. **Ford**. You see, you articulated in part the dilemma of this committee. While we have been authorizing title I, neither the House nor the Senate Appropriations Committee is willing to appropriate any money for it. FIPSE has been supported with appropriations but the administration proposal is it be eliminated. So while we are trying to save a program that is already being funded, they are asking us to replicate, in effect, the salutory features of a program that is already targeted for extinction. We will be very fortunate if we can keep that one alive, and I doubt very much if we can expand this one very much and realistically expect it will increase the probability of any funding at all. That is not where I would like to be, but that is where we are.

Mr. **Zachariadis**. If there is any funding to be made available for Title I—and I don't know how one goes about doing that; you know that much better than me—all we are saying is that if funding becomes available and a program is implemented, then the eligibility provisions ought to be opened up and the program ought to be targeted toward those most in need.

Those are the recommendations that I think come from both our organizations.

Mr. **Ford**. Thank you.

They are summoning us now for a live quorum followed by a 5-minute vote. I am very sorry to cut this off because you broached a number of interesting thoughts, but I appreciate very much what you have contributed to the record and hope that you will encourage support for continuing the existence of title I with or without improvement.

[Whereupon, at 12:15 p.m., the subcommittee adjourned subject to the call of the Chair.]

[Additional material submitted for the record follows:]

Prepared Statement of Alan B. Knox, Professor of Continuing Education, University of Wisconsin and President, American Association for Adult and Continuing Education

I appreciate this opportunity to speak in support of reauthorization of Title I of the Higher Education Act of 1965 as amended. During more than thirty years as a continuing education teacher, administrator, and professor in New York, Nebraska, Illinois, and Wisconsin I worked with educational programs for adults of the type Title I aims to strengthen, and have witnessed great benefits.

My main point is that proposed revision of Title I to provide direct grants to post secondary institutions to stimulate innovative collaborative continuing education delivery systems and adult learner services, constitutes a realistic effort in which a minimal Federal investment is likely to yield a maximal return in the form of individual and societal benefits, especially economic revitalization. Following my comments, I welcome your questions.

Most of you are aware that adult learners who attend short term credit or noncredit programs or enroll part-time in the evening or at off campus locations constitute the new majority in post-secondary education. However, higher education outreach and extension has a long tradition. In my own state prior to World War I, Governor Robert LaFollette and University President Charles Van Hise advanced the Wisconsin Idea as a partnership to help men and women from all walks of life throughout the state to deal with social, political, and economic issues. This year a state Commission on the Wisconsin Idea for the 21st Century has concluded that the boundaries of the campus extend far beyond the boundaries of the State, into the nation and the world.

Long standing commitments of continuing education to equity and access, as reflected in outreach programs for minorities and economically less advantaged adults, are becoming more national and international. Events around the world dramatically affect Wisconsin farmers, manufacturers, and almost everyone else, so that outreach activities include languages and world affairs as well as agriculture and engineering. Title I can stimulate innovation and sharing in the coming years when we appear to be facing an unprecedented challenge to development of the human resources of this country.

We all understand the necessity for continual reeducation and training of all skill levels in our work force, so that productivity in current jobs and creation of new jobs keeps us competitive internationally. Furthermore, in an earlier era in which the focus was on absorbing young people into the work force to then do the same type of work throughout their career. We are now moving to an era in which most of the work force of 5 or 10 years from now is already in today's work force and they will require continuing reeducation to remain productive as they adjust to four or five major career changes that result from rapid social and technological change.

There is less understanding of equally important continuing education for other adult roles as citizens and family members. In addition to enriching the quality of life, such programs enable citizens to engage in community problem solving upon which our democratic society depends. For twenty years, Title I efforts have stimulated post-secondary institutions to work with community groups to initiate continuing education programs for community problem solving, many of which would not have occurred but for title I impetus. Part of the reason is the multiplier effect of collaboration.

I currently serve as President of the American Association for Adult and Continuing Education, whose members conduct educational programs for adults for all types of organizations (schools, colleges, universities, libraries, museums, employers, labor unions, penal institutions, professional associations, religious institutions, military, community agencies, hospitals, and all types of voluntary associations). A benefit of this association is that members meet and cooperate with counterparts from other types of providers. Title I also promotes such collaboration and resource sharing, such as when a university develops materials or provides staff development for public school adult basic education, or a community college conducts a retraining program with employers and labor unions. Title I emphasis on counseling and information services for adult learners, helps them discover and use this wide variety of continuing education providers.

A further strength of Title I, is its multiplier effect by initiating new ideas, delivery systems, and adult learner services through matching resources which increase as Title I funds are phased out as a new program becomes established. Large societal returns on small Title I investments also occur from targeted research and evaluation projects, and inservice staff development of continuing education instructors and administrators. We have learned ways to increase this multiplier effect and the continuation of programs initiated with Title I funding, as a result of national studies such as the one Jim Farmer and I conducted on alternative patterns for strengthening Title I projects (Farmer and Knox, 1977), and the Lindquist and Associates (1983) study on sharing good practice from programs assisted by the Fund for the Improvement of Post Secondary Education.

One way to help keep Title I focused on societal benefits is with an effective National Advisory Council in which a majority of the members are closely associated with continuing higher education, and which cooperates with related advisory councils concerned with vocational education and adult education.

All of these desirable features of a Title I program are not ends in and of themselves, however. The justification for Federal support of Title I projects depends on the resultant benefits to individuals and society. Because educational programs for adults are very pluralistic and decentralized, Federal leadership through Title I can make a distinctive contribution to increasing such benefits.

Here are some examples of past and potential outcomes initiated with Title I assistance programs.

1. Private university faculty members and student interns assist public community college continuing education staff members to work with local organizations in low income urban neighborhoods to establish career assistance centers aimed at unemployed minority young adults. Cooperative support of such ongoing centers in-

creases greatly the number of less advantaged young people who receive career guidance, remedial education, and job finding assistance to enhance their proficiencies and become employed.

2. Land Grant university extension staff members work with local community leaders to establish distance education programs to serve sparsely populated sections of the state by use of educational telephone networks, videotapes, and correspondence study. The resulting continuing education programs serve both farm families with topics aimed to help their farm business survive, and professionals such as dentists, attorneys, pharmacists, and bankers with topics on new developments in their fields to enable them to better serve local residents.

3. Professors and students from fields such as social work, community psychology, sociology, and education in a liberal arts college respond to a request from a nearby home for retarded adults (and subsequently interested community agencies) by jointly initiating a Title I project which includes a work study program for retarded adults. The program continued and expanded far beyond the initial funding period, because of faculty and student practicum contributions combined with volunteer help, facilities and financial assistance from community agencies.

4. The state university in concert with state agencies and community colleges in an economically depressed section of the state, assist local citizens and government officials with solution of community problems of high priority to them. As a result, one community solved its water supply problem, another improved its schools, a third strengthened rural health care and referrals, and a fourth both attracted new industry and provided assistance to struggling small businesses.

The distinctive Federal contribution to strengthening post secondary continuing education and public service activities for American men and women reflects the pluralism of continuing education provision and the national interest in accelerating human resource development. Parallel to multiple local providers of educational programs for adults, most Federal departments support such programs. Examples include Cooperative Extension Service in the Department of Agriculture, Job Training Partnership in the Department of Labor, education and training of military personnel in the Department of Defense, and Adult Basic Education in the Department of Education. Other examples abound such as environmental protection, arts and humanities, health professions, Native Americans, library services, refugees, and energy conservation. Title I support provides seed money to stimulate priority setting, sharing, and assistance (Knox, 1975, 1982). The multiplier effect results from initiating and publicizing demonstration projects, and targeted support for research, evaluation, and staff development for continuing education faculty and administrators. Post secondary institutions are ideally suited for this collaborative role, which also increases the relevance of their teaching and research. Federal leadership through Title I is essential because the national interest requires strengthening and cooperation on behalf of lifelong learning of adults. Resultant educational programs are responsive to local priorities and if useful tend to continue with local support.

The need for targeted national leadership on behalf of continuing higher education has never been greater. Recent publications on leadership to understanding emerging trends and help revitalize America, emphasize the crucial contribution of continuing education (Naisbitt, 1982; Peters and Waterman, 1982; Etzioni, 1983; Perelman, 1984; Niebuhr, 1984; Odiorne, 1984). A revised Title I can provide a realistic minimal spearhead for such Federal leadership.

In conclusion, I urge reauthorization of Title I, with emphasis on the following features:

1. Encouraging all types of post-secondary providers to cooperate for innovating and strengthening continuing education.

2. Emphasizing continuing education for economic revitalization and public responsibility.

3. Providing seed money to stimulate innovation and sharing.

4. Supporting collaboration and resource sharing to achieve a multiplier effect.

5. Including information and guidance services to increase access by adult learners.

6. Strengthening support of research, evaluation, and staff development of continuing education teachers and administrators to undergird the foregoing features.

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